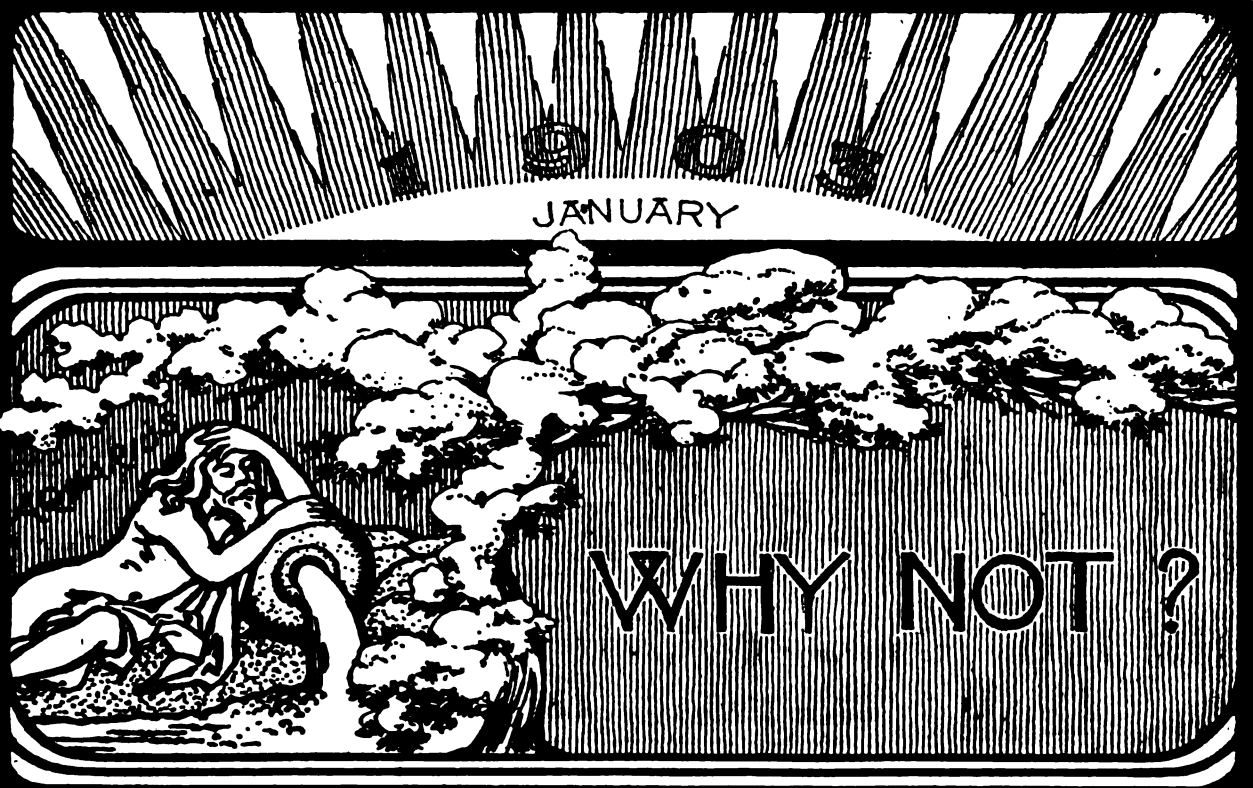

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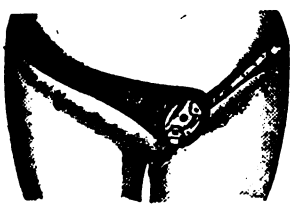

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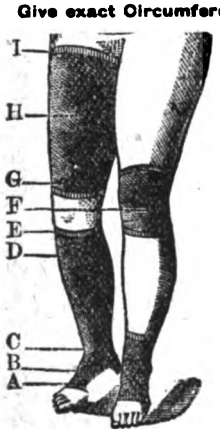

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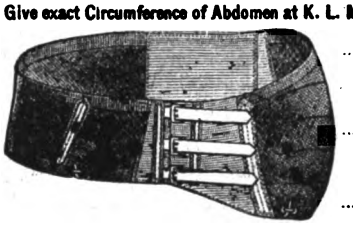

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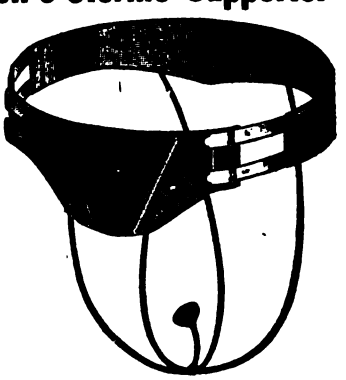

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ORIGINAL ARTICLES.

THE IRRATIONAL STARVATION TREATMENT OF APPENDICITIS.

BY JOHN B. DEAVER, M. D., SURGEON-IN-CHIEF, GERMAN HOSPITAL, PHILADELPHIA.

Acute appendicitis is dangerous in that it excites septic peritonitis, the gravity of the appendiceal inflammation depending upon the severity of the peritoneal infection. In our experience, based upon several thousand cases, this infection is progressive, and in order to stop the invading process the source of infection must be removed. We must then admit that the early removal of the appendix is the only treatment which promises a low mortality. Furthermore, if the appendix is taken out in the pre-inflammatory stage, that of appendiceal colic, with aseptic surgery and barring accidents, there should be no mortality.

Were it possible to be as cock-sure of the degree and bacteriological type of the peritoneal inflammation as we are of the good results following the early removal of the appendix, *then and then only*, might there be ground for arguing in favor of delay.

To claim to foresee the degree, type and extent of the peritoneal inflammation is, to say the least, absurd. It is the privilege of the gentlemen who make these pretensions to claim so great knowledge, but to possess this knowledge, I do not think any sane mortal will admit. I have no sympathy for those deceiving themselves in this way, but great sympathy for the poor sufferers who unfortunately come under their care.

We claim to be able to recognize a grave type of peritonitis, but beyond this we make no pretensions and have but little confidence in statements made as to the degree, type and extent of the peritoneal infection. Bearing this in mind, we wish to sound a note of warning against the advocates of the so-called "rest" or starvation treatment of appendicitis; not, however, against the practice in certain cases of washing out the stomach and giving of all nourishment per rectum. For this method it is claimed that, by withdrawing all nourishment and cathartics by the mouth, by rectal feeding, gastric lavage and the use of small doses of opium and local antiphlogistics, particularly antiphlogistine (whatever that may be), which I have seen used, the extension of the peritoneal inflammation in the presence of a gangrenous and perforative appendicitis will "regularly" remain circumscribed. It is further claimed that these patients recovering, come to the operating table with their abdominal cavities practically in a normal condition, except occasionally a small abscess at the site of the origin of the trouble, or the presence of adhesions. Lastly, it is claimed that by the use of this method of treatment the mortality of acute appendicitis may be markedly reduced.

Against these statements it is the object of this paper to protest and to make a firm stand against any form of treatment, other than early operation, aiming to restore the peritoneal cavity to the condition which exists in the early hours of an appendiceal inflammation.

The author's experience for the past two and a half months has furnished the lesson from which the objection to the rest treatment is drawn.

From June 15th to September 1st there were operated upon in the German

Hospital 98 cases of appendicitis, not including the cases occurring in children. (These statistics were compiled by my senior house surgeon, Dr. Muller.)

Twenty-seven cases were of the type called chronic, and all recovered. The remainder, 71, were acute in character, and 12 died, a mortality of 16.9 per cent. A detailed study of these cases reveals the followings points of interest:

Thirty-two patients suffering from acute appendicitis were sent to the hospital early in the course of the disease, and in whom the infective process was limited to the appendix or to the tissues immediately contiguous. These cases were operated upon immediately, after cleansing the digestive tract with a gentle cathartic or after the giving of an enema. They were typical of the acute type of appendicitis, with the sudden onset, the usual symptoms and a swollen, œdematous and congested appendix, sometimes with exudate or a local peritonitis about the diseased organ; in a few cases there was a small abscess immediately about a necrotic focus in the appendix.

With the exception of one case, they all made a nice and uneventful recovery —a mortality of 3.1 per cent. The single death was a man of 64 years of age, whose appendix was removed twelve hours after the onset of the attack. His abdomen was closed with silk tier sutures and he made a good recovery from the effects of operation. Nine days later he collapsed and suddenly died from cardiac dilatation. Autopsy showed a healthy peritoneum and the wound in the cecum healed and in good condition.

The remaining 39 cases were those unfortunate patients in whom the infective process was allowed to proceed until the diseased appendix had perforated and become necrotic. About this organ and sometimes extending into the pelvis or upwards towards the liver, an abscess existed. They were suffering from systemic poisoning induced by the presence of this highly infectious pus, and an examination of the condition of the abdomen revealed a grave peritonitis from leakage.

From their symptoms we knew that they had had an acute attack of appendicitis; from their appearance we knew that they were suffering from grave peritonitis; but beyond this we made no pretensions. Owing, in most instances, to the wishes of the attending physician or to the patient himself, operation was performed within thirty-six hours on 22 of these patients. Five died, a mortality of 22.7 per cent.

In every case there was bilateral rigidity, slight distension, and a more or less well defined mass. At operation an abscess was found, usually behind the cecum and surrounding the necrotic and perforated appendix. There was but little difficulty in protecting uninfected peritoneum with gauze pads. The abscess was opened, evacuated, the cavity thoroughly cleansed and drained, after removing the appendix or its remains.

At operation three of the cases were found to have free pus throughout the abdominal cavity. These all died twenty-four to forty-eight hours after operation and the autopsy revealed general purulent peritonitis.

A fourth death was that of a patient with a large abscess, well walled off, but suffering from absorption of septic products. The operation further weakened the resisting power and death ensued in a few days. Autopsy revealed gangrene of the cecum, local adhesive peritonitis with the remaining peritoneum apparently healthy.

The fifth case was one that had been treated for gastritis for six weeks before admission; she was confined to bed and given minute quantities of nourishment by mouth and with occasional rectal alimentation. A sort of modified "rest" treatment. She slowly became more and more septic and was operated upon in twenty-four hours after admission. A large mass of adhesions was present There was pus about a badly diseased appendix, in the pelvis, and an infected tube on the right side. Patient died five days after operation and the autopsy showed a gangrenous cecum with a local peritonitis.

It is hardly fair to class this case among these deaths because of the closeness with which her attending physician

followed the starvation treatment for so many weeks.

The remaining 17 cases were treated by the "rest" or starvation treatment, as practiced by Dr. Ochsner. These patients were admitted on an average of five days after the onset of the attack. Fifteen cases had bilateral rigidity. In two cases right-sided rigidity alone was present. In every case distention was present in greater or less degree. There was fever, a rapid pulse and tenderness over the right iliac fossa.

In nine cases a mass could be palpated. In eight cases none was present. The leucocytes numbered from 15,000 to 30,000, with a polyneuclear increase indicating pus.

The stomach was well washed out and all food and catharsis by mouth was withdrawn. Rectal feeding every four to six hours was resorted to and either ice or warm fomentations applied to the abdomen.

The progress of the case was then carefully watched. We found that the distension lessened in 13 of the cases and that the rigidity became less pronounced in these cases. In the other four there was no improvement noticed after from four to seven days of treatment.

In those cases where a mass existed on admission we found a slow and steady increase in the size of this tumor. It never decreased in the slightest extent. Of the eight cases in which a mass was absent on the first examination, in four a mass promptly appeared a few days after the inauguration of the rest treatment and was accompanied by agonizing pain. In three cases there never was a mass and these were those cases where a small abscess was found about the appendix with a mass of adhesions in the right iliac fossa. One of them died five days after operation. This patient was admitted seven days after the onset of the attack, with marked abdominal distension, pain and tenderness, most marked on the left side. No distinct mass could be determined. There was leucocytosis of 17,600. The patient was slightly septic, the starvation treatment was inaugurated and continued for nine days. During the first few days of this treatment the condition seemed to improve, that is, the condition of the abdomen, but the patient slowly weakened and about the fifth day relapsed, and the abdomen once more distending. There was slight delirium for a few hours. Again an improvement began and operation was performed. About the appendix a small abscess was found with the organ on the brim of the pelvis and adherent to the cecum, which was soft and friable. The right side of the abdominal cavity was a mass of adhesions, which were more highly organized about the site of the appendix and more recent towards the middle line. The appendix was removed and the pelvis and the right iliac fossa were drained.

On the second day after operation the patient began to show the characteristic signs of septic peritonitis and died on the fifth day. An autopsy revealed a general adhesive peritonitis with collections of pus in the pelvis and among the coils of intestine, and a gangrenous cecum.

It is evident, in my mind, that an early operation would have saved this case. One performed before the advancing peritonitis had sapped the resistance of the patient until operation was too late to prevent death.

The eighth case was one in which the diagnosis grossly exaggerated the gravity of the intra-peritoneal lesion. After fifteen days of "rest' treatment, the appendix was found thickened and nearly occluded and adherent to the floor of the iliac fossa; very few adhesions were present. A microscopical examination revealed an interstitial appendicitis of long standing.

The course of the 13 cases with large abscess formation was that of a steady progressing towards increase in size of the mass and sooner or later the absorption of its septic products. When the symptoms of pyæmia began operation was performed.

It was then found that instead of the nearly normal peritoneum, the entire rightside was a mass of adhesions, with a large abscess about the infecting appendix, in several cases extending from the pelvis to the liver. The amount of pus in some of these cases was too enormous

for description and was very malodorous.

In two fatal cases the entire pelvis was a huge abscess extending up to the right iliac fossa.

In six cases no attempt was made to find the appendix; we were satisfied with opening and draining the abscess, so terrible was the condition of affairs found. In one case the appendix had sloughed off. Twocases were opened by reflecting the peritoneum and going into the abscess from the outside.

The cases were all well drained and left unsutured.

Six of these 17 cases died, a mortality of 35.3 per cent. Where, then, is the reduction in the mortality? Five of these six patients were distinctly made worse by waiting and some of them would probably have recovered had they been operated upon earlier. It was observed that even the etherization of these cases was more difficult than usual and I have frequently remarked to my students that the way a patient takes ether is often an index to the gravity of the intra-peritoneal lesion. After opening the abdomen it was a serious problem how to dispose gauze pads before opening the abscess. There were so many adhesions, not so complete as to effectually wall off the pus, but enough to interfere with the placing of gauze. It was also found that the infected coils of intestine were so friable that the breaking of any adhesions would cause the serous coat to peel off. The latter remark might suggest that in the presence of a walled off abscess the peritoneal cavity should not be opened, but it is impossible to gain access to these abscesses in any other way, situated as they are, behind the cecum and colon and well to the median line side of the flank.

The autopsies revealed a general purulent peritonitis in four cases, a general adhesive peritonitis in two cases, with pockets of pus among the coils of bowel and in the pelvis. The cecum was gangrenous in five of the autopsies.

The cases recovering were discharged on an average of thirty-two days after operation, while five of the cases are at date of writing still in the hospital, one of them with a large fecal fistula, twenty-nine days after operation. In a second case a secondary pus collection was evacuated a few days ago.

What are the lessons we draw from these cases?

1st. That an early operation, preferably in the stage of appendiceal colic, *is the only rational procedure,* and is the only treatment which will reduce the mortality in acute appendicitis to insignificant figures.

2nd. That the so-called "rest" treatment of appendicitis fails to check peritoneal inflammation and will *in the majority of instances, harm* the patient.

The figures presented in this paper bear their statements out to the letter. In the cases where there was no active inflammation, no infection, the mortality was nil.

In the cases operated upon before the peritoneal inflammation had become extensive, or in those where the appendix alone was involved, the mortality was 3.1 per cent., and that mortality was due to a late complication.

In those cases suffering from advanced peritonitis with abscess formation, and operated upon immediately, the mortality rose to 22.7 per cent, while the "rest" treatment, for which it is claimed that the mortality is greatly reduced, gave 35.3 per cent. of deaths.

It is evident that the gentlemen who make these claims have either been deceived in that they have encountered a different class of cases than we have, or they have misjudged their cases. I believe that teaching the rest or starvation treatment has and will raise the mortality of the disease under discussion, in that it cannot benefit nor improve the serious cases where the intra-peritoneal lesion is extensive; that it defeats the cause of early operation; and last, but by no means least, it gives the attending medical man, as well as the friends of the patient, a false hope. It gives them something apparently tangible to cling to as against the teaching of operation immediately following the making of an early diagnosis.

In my own experience I find that a

septic process once inaugurated continues to play havoc so long as it lasts, and no treatment other than early operation will stay that process.

Those cases of appendicitis brought to the operating table several days after the onset of the disease, where the starvation treatment has been carried out, and a local abscess or a mass of exudate and adhesions are found, do not by any means convince me that these patients would not have been better off by operation earlier. In my experience these cases do not give a high mortality from operation.

To attempt to foretell what the intraperitoneal condition is, or what it will be a few days or a week later, is assuming a graver responsibility than is justifiable. Such a prediction is never made by those whose experience with the disease justifies such confidence.

I have never had cause to regret the removal of an healthy appendix, if there is such a thing, and I have not yet seen any influence, except for the worse, exerted upon the progress of peritoneal inflammation following acute appendicitis, by the use of the "rest" treatment.

I am willing to grant that operation in the presence of an acutely inflamed general peritonitis is attended by great risk to life, and therefore it is often wise to defer operation in the hope that the inflammatory process will become localized. This is often my practice; but I flatly deny that the starvation plan of treatment promises more in these cases than the more common practice of abstaining absolutely from giving opium, keeping the bowels freely open by solid cathartics, giving nourishment by the rectum, when the stomach is intolerant, and using ice or heat locally in the shape of poultices or hot turpentine stupes.

APPENDICITIS.

BY WM. J. GILLETTE, M. D.

Professor of Abdominal Surgery and Gynecology, Toledo Medical College; Surgeon to Robinwood Hospital, Toledo, Ohio.

The subject of appendicitis is one of continued interest. Much has been written about it, and many valuable facts obtained, regarding its pathology and successful treatment; but to say the whole book has been written and is now ready to be closed, would not be stating a fact.

Our treatment of this disease, though much improved over former times, is not as yet all that can be desired; but many of the best minds in the profession are actively working at its various problems, as they have been for a number of years past, and without doubt the death rate from it, will be yet further greatly reduced; but by present indications this will only come, when the laity is educated to an appreciation of the fact, that appendicitis is a very fatal disease. Its death rate from the primary attack, if left to itself, being from 16 to 20 per cent, according to Senn, and from 14 to 28 per cent, according to Osler; but if operated early, within the first twenty-four or thirty-six hours, there is but little to fear from it. The laity will not be so educated, however, until the general practitioner fully realizes his responsibility, and ceases to act, as if appendicitis could in any way be controlled by medication; and further, that no man can tell at the onset of an attack what its outcome may be, it matters not how trivial the initial symptoms appear.

The profession is, I think, entirely in accord in considering appendicitis a surgical disease; and that whenever the appendix has become the seat of an inflammation, the only safe way to deal with it is by its removal. While there is unanimity of opinion upon this point, it is far otherwise upon some others, and especially as to the proper time in the progress of the disease when the operation should be performed. At the last meeting of the American Medical Association at Saratoga, this point was well discussed; Dr. John Deaver, of Philadelphia, and his followers taking the much debated ground that all cases should be operated at once when first seen, it matters not whether it be the first, fifth or tenth day of the attack; while Dr. Ochsner, of Chicago, and his adherents argued that cases seen after the first forty-eight hours, or after septic material has probably escaped from the appendix to the surrounding tissues

should not be operated then; but peristalsis held in abeyance with opium, and by the exclusion of food from the stomach, that a limiting wall may form, localizing the inflammation. After this the operation may be performed. That appendicitis is a distinctly surgical disease, was well demonstrated from a pathological standpoint, at this same meeting by Dr. Robt. Abbe of New York, who presented a large number of appendices that had been removed, the subjects of inflammation all giving evidence of a narrowing at some point of their lumen. He compared them, not inaptly, to conditions of strictured urethra. It seems to be a fact that in mose cases of inflamed appendices, this strictured condition is found at a point just proximal to the seat of inflammation; and behind this narrowed lumen there resides an enterolith, one or more, unable by reason of it, to pass into the bowel, and so remains to create inflammation, necrosis, and often perforation followed by escape into the peritoneal cavity, of deadly pathogenic germs. Dr. Abbe argues that by reason of their nature, these strictures, as in the urethra, can never be cured by the unaided efforts of nature; and when they are once demonstrated to exist, by an attack of inflammation, the patient is ever after in danger of their making trouble serious in character. This being the case, then, it becomes our duty to invariably acquaint our patients with their danger. It is quite true, however, that after an attack, especially of suppurative appendicitis, the patient may remain well, but this is clinically the exception and not the rule. In such instances the appendix has been destroyed by long continued suppuration, and the foreign body escaped with the discharge of pus into the bowel. Nature has effected a cure; but who dare say to his patient, or by what means can a physician know that in a given case this has occurred or will. How can he with perfect honesty, say to his patient, if called at the beginning of an appendicitis, aught else than substantially the following: "My dear sir, I canot tell you what the outcome of your trouble may be, but I can say this, you stand from sixteen to twenty chances in one hundred of dying, if left to the unaided efforts of nature, or to medication which means the same thing; or, by undergoing immediate operation, you face one half of one chance in one hundred of dying. Now, which do you prefer; or, in other words, take from sixteen to twenty chances in one hundred of dying without operation, or half of one chance in one hundred with it?"

The diagnosis of appendicitis is not always easy. Cases are continually seen by men of wide experience, and not recognized as such. A very interesting one of this kind is recorded in the *Medical Record* of March, 1902, in which a child had a gangrenous appendix and died after five days of illness, the disease at no time presenting the cardinal symptoms of heat, pain, and tenderness near McBurney's point; in fact, almost no abdominal symptoms at all; and yet at post-mortem a gangrenous appendix was found, as well as gangrene of a portion of the caecum. The diagnosis was not made before death, though such men as W. T. Bull, L. Emmett Holt, Winters, and E. G. Janeway saw and examined the patient. Cases such as this, however, are not common, and we can usually, without difficulty, arrive at a diagnosis. The symptom of pain, not usually localized to begin with, coming on, frequently after a hearty meal, referred to almost any part of the abdomen, and later to McBurney's point, makes the diagnosis almost certain. It is true, however, that even when the pain is referred to other locations, pressure over the appendix gives rise to most marked distress. The right rectus muscle will be more rigid than the left, at least until general peritonitis supervenes. When the appendix is found at a distance from its normal site (and it may be found on the opposite side) the pressure sign may confuse. Given a pain in the abdomen, not due in the female to inflamed ovaries and tubes, the chances are ten to one you have an appendicitis to deal with. The exceptions will be intestinal colic, perforation or obstruction, gall stones, kidney or ureteral colic. It is curious the number of cases of appendicitis to which it is my lot to be called during a year, in which the attending physician has made a diagnosis of intestinal ob-

struction. The reason, no doubt, for this is, the symptoms of severe vomiting and complete obstipation which so frequently obtain with appendicitis. The character of the vomitus of peritonitis should usually alone make a differential diagnosis between these two conditions. In peritonitis it is seldom stercoral in character, but in complete obstruction with an occasional exception, is always so.

The differential diagnosis between gall stone colic and appendicitis I have usually been able to determine, by observing that with gall stones the urine contains a large quantity of bile, and the area of hepatic dullness is increased.

A differential diagnosis between kidney and ureteral colic, and appendicitis, can be made frequently by an examination of the urine, which will contain blood or pus if the trouble lies in the kidneys or ureters.

The greatest difficulty has some times been encountered in making diagnosis between appendicitis and ruptured tubal pregnancy, on the right side, and this complication must be kept in mind, if the patient be a child-bearing female. The fact that such a patient has missed a menstruation, but a short time prior, is always significant.

In three instances of extra uterine pregnancy, I found the appendix adherent to the fetal sac, and the symptoms and physical signs of both appendicitis and a ruptured tubal pregnancy, were present in so marked a degree that I was unable to say before opening the abdomen, which I might find.

As before stated, the only treatment for appendicitis, curative in character, is now universally granted to be the surgical, and the only question yet to be settled, in this connection, is when to operate. It has been fully demonstrated that if all cases could be operated, by a surgeon of skill, within the first thirty-six or forty-eight hours of the attack, or before septic material has escaped from the appendix to the surrounding tissues, there would practically be no death rate at all, from appendicitis; but after this time, however, the patient rapidly enters a period, for a time at least, which progressively becomes more dangerous to deal with.

Deaver, operating his acute cases, with few exceptions, when first seen, reports a death rate from them of about 15 per cent.

Ochsner, waiting to operate until this acute period of inflammation is by, reports a death rate of about 5 per cent, but his statistics do not seem quite fair, for it appears that this 5 per cent is based on all the cases entering his hospital, while Deaver's 15 per cent is based only on his acute cases. When this fact is taken into consideration, the large discrepancy between the death rates reported by these two men nearly or quite disappears, for those presenting for operation between attacks, have practically no death rate at all, and these constitute a very large proportion of cases observed.

Lawson Tait taught that the most efficient means of getting rid of peritoneal infections is to drain, which can be done by two routes, one by way of a drainage tube, and the other by way of the alimentary canal, using cathartics. The truth of this teaching we have all many times demonstrated. It is the infection that kills, and to shut up with opium, as Dr. Ochsner recommends, nature's most efficient channel for its elimination, seems decidedly wrong, besides who can say at the onset in a given case, whether or not nature will be able to localize an inflammation. Cases where nature has failed to do so and the patient goes straight on to death, are altogether too frequently observed.

Herein lies the argument in favor of operation without delay. The cases, however, when first seen, with the abdomen greatly distended, the vitality low; cases with Bright's disease or diabetes; cases that do not stand operative interference well, these should no doubt be left to nature, food given only by the rectum, etc., but others, I must confess, I think should all be operated, and at once.

At the last meeting of the American Gynecological Society held in Washington, Doctor Deaver read a paper entitled "The Irrational Starvation Treatment of Appendicitis," and detailed in it, seven-

ten cases treated at the German Hospital in Philadelphia by it. Six of these seventeen cases died, a death rate of 35.3 per cent. He very pertinently remarks, "Where then is the reduction in mortality by its use?" and the lessons he draws from them are:

"First. That an early operation is the only rational procedure, and is the only treatment which will reduce the mortality in acute appendicitis to insignificant figures."

"Second. That the so-called 'Rest' treatment of appendicitis fails to check inflammation and will, in the majority of instances, harm the patient." He further in this connection says: "I believe teaching the 'Rest' or 'Starvation' treatment has and will raise the mortality of the disease under discussion." "I am willing to grant that operation in the presence of an acutely inflamed general peritonitis is attended by great risk of life, and therefore it is often wise to defer operation, in the hope that the inflammatory process will become localized. This is my practice, but I flatly deny that the starvation plan of treatment promises more, in these cases, than the more common practice of abstaining absolutely from giving opium, keeping the bowels open by solid cathartics, giving nourishment by the rectum, when the stomach is intolerant, and using ice or heat locally in the shape of poultices or hot turpentine stupes."

In this arraignment of the so-called "Rest" treatment, when he says: "It fails to check inflammation and will in the majority of instances harm the patient," and further, "that teaching the rest or starvation treatment has and will raise the mortality of the disease under discussion," I believe I have abundant reason to concur, for during the past three months I have seen at least five deaths from appendicitis where it had been employed. In all of these I was called to operate. One was dead when I reached the village where she resided, and two others were so near death when I first saw them, that operation could only hasten it, and I declined to interfere.

The remaining two operated, were septic at the time, and in both instances the abdomen was full of pus. It would have been better to have let them alone also.

These last, figure in the following short report of my operations for appendicitis, during the twelve months from January 1st, 1902, to January 1st, 1903, and help to swell my death rate.

During this time I operated upon 71 cases; one a tuberculous appendix.

Forty-one were operated during the acute stage of the disease, and 30 in the quiescent. Of these last, none died as a result.

Of the 41 operated during the acute attack, 32 were operated in the presence of pus and infection, which had extended to the tissues outside of the appendix. Of these, 7 died. Of the remaining 9, operated early in the acute stage, while infection was yet confined to the appendix, none died.

This would make a death rate, a percentage, if based upon the entire number operated, of a little less than ten per cent (10%), but if based as it should be, upon only the acute cases, of 17 per cent (17%) and a fraction, a very high death rate I grant you, but yet only half that reported by Dr. Deaver in the cases in his hands subjected to the "Rest" or "Starvation" treatment recommended by Dr. Ochsner.

And now in conclusion, if this paper teaches anything, it is, that the only rational treatment for appendicitis, as it now appears, if the present large death rate is to be lowered, is to operate early, at the onset of the attack, not delaying until the patient has become septic, and the abdomen full of pus. That no reliance should be placed upon what is known as the Ochsner treatment, for my experience leads me to believe, with Dr. Deaver, that too much has been claimed for it, and that it should be employed, if at all, in very exceptional cases, confined strictly to those far advanced with the disease when first seen, and the vitality of the patient low.

CANCER OF THE STOMACH,

With Report of a Case of Pylorectomy.

BY M. STAMM, M. D., FREMONT, OHIO.

(*Read before the Northwestern Ohio Medical Association at Findlay, Dec. 12, 1902.*)

When Billroth, some twenty years ago, made his first resections of the stomach, great expectations were entertained in regard to a possible cure of this dread disease. Although a small number of cases have lived longer than four years, the general result has not been such that surgeons would undertake the operation as readily as they would in cancer of the breast or womb. This is not due so much to the great risk of the operation as it is to our inability of making an early diagnosis so that patients, as a rule, come into the hands of the surgeon in such an advanced condition that even an extensive operation will not prevent a recurrence of the trouble. Generally, when the symptoms of pain, tumor, vomiting, emaciation, cachexia, and absence of free hydrochloric acid, as well as the presence of micro-organisms, complete the clinical picture the disease has already made such headway that the surgeon cannot be sure whether all the affected lymphatic glands and tissue can be or have been removed. The great desideratum, therefore, is to find ways and means to diagnose this cancerous condition in its incipiency. Gluzinsky seems to have brought us one step nearer this solution and his ideas have found some support in a few cases upon which he has operated. He thinks it is not sufficient to examine the contents of the stomach only once a day, but that at least three daily examinations should be made. In that way he found that at one time free hydrochloric acid may be present, and after the next test meal altogether absent or only be present in traces. This fact would indicate to him the existence of a mucous catarrh, and, if combined with some other symptoms, it would suggest the idea of an early stage of carcinoma. His method, i. e., consists in making an examination before breakfast, which would then demonstrate whether remnants of food, taken the evening or some time before, are present, and if so, they are examined chemically and microscopically. After this the stomach is washed out and a test breakfast of egg albumen (one egg to 100 c. c. of water), given; about three-quarters of an hour later the contents of the stomach are examined again. At noon another test meal (beefsteak, 6 ounces, with soup and one roll), is given, and at the end of four hours the stomach contents are examined again. He uses Gunzburg's reagents and if the reddish color appears promptly he calls it a distinct or very distinct reaction; if only a pale rose color appears he calls it tolerably distinct, and if the color is paler still it would only show traces. In chronic ulcer of the pylorus the reaction of free hydrochloric acid is invariably quite distinct, but if the other symptoms continue, and if there is absence of free hydrochloric acid at one of these examinations during the day, it would lead him to the conclusion that the acid catarrh has changed into a mucous catarrh, and this, with some other symptoms, would indicate a change into carcinoma. The most frequent seat is at the pylorus or at the lesser curvature. Post mortem we find about 60 per cent. at the pylorus, 20 per cent at the lesser curvature, 10 per cent. at the cardiac and 10 per cent. in other regions of the stomach.

Pathologically we distinguish (I) cylinder celled; (II) the medullary form; (III) the scirrhus; (IV) the gelatinous form. The first form is soft, vascular, has a tendency to bleed, but not to decay. It may appear in isolated nodules, polypoid, or cauliflower excrecences, and is mostly seated at the pylorus. It does not lead readily to diffusion and metastasis, and, therefore, offers better chances for radical removal than other forms. The second, or medullary form appears in soft nodules, with tendency to decay and metastasis; it readily penetrates the serosa and is found in all parts of the stomach. The scirrhus is hard, with very vascular connective tissue, of slow growth and tendency to atrophy. The mucous membrane shows flat, irregular ulcers, the walls of the stomach a diffuse thick-

ening, so that the whole wall may be involved. The gelatinous form resembles scirrhus in point of diffusion, but its tissue spaces are filled with a gelatinous, slimy mass, containing a few cancer cells. Carcinoma of the stomach spreads by continuity and is generally sharply defined at the pylorus, especially on the side of the serosa. This is of some advantage to the surgeon, as in the majority of cases he will not be obliged to remove much of the duodenum. Outside of the stomach walls cancer may spread along the lymphatics or blood-vessels, especially the gastric veins, vena porta or hepatic veins. But it may also infect other organs by contact, i. e., the liver, pancreas, colon or parietal walls, or after perforation through the serous coat some cancer cells may be shifted to parts in the abdominal cavity through peristalsis of the bowels.

When the cancer is seated at the pylorus or at the cardiac portion, emaciation soon occurs; this may, however, be the case also in benign stricture of the pylorus. Disturbance of nutrition is much slower when cancer is seated away from the orifices; cachexia only becomes manifest in the later stages. The tongue is generally thickly coated, appetite is poor, and the patient complains of bad taste, eructation and water brash. The motility of the stomach, as a rule, is impaired and signs of mucous catarrh and atrophy of the mucous membrane manifest themselves. There is a diminution of free hydrochloric acid and ferments and finally a total absence of them. Micro-organisms then have full sway and produce lactic acid fermentation. In cases of carcinoma developed on the basis of a simple ulcer, free hydrochloric acid is present up to a later stage. Lactic acid fermentation occurs in very few cases outside of cancer, and unfortunately for diagnostic purposes, it shows itself only in advanced cases. Tumor, if present, is perhaps the most important diagnostic factor, when accompanied by some other symptoms. It will vary in size, and, if palpable, generally has a smooth surface, is rarely nodular, of solid consistency, sometimes as hard as cartilage, and may be accompanied by pain, but never as severe as in cases of gastric ulcer. Percussion sound is only dull in large cancers. It is not always easy to localize the tumor and much depends upon whether the stomach is empty or full, as cancer of the pylorus or of the lesser curvature may reach down to the umbilicus when the stomach is distended, and retract under the ribs when empty, and in that way escape our detection. In case of gastroptosis, or gastrectasy, the pyloric tumor may even reach down to the rim of the pelvis. The mobility of the tumor can also be elucidated by deep inspiration, by inflation of the stomach or colon with air, by palpation, or by changing the position of the patient. We may have to distinguish it from tumors of the colon, omentum, gall-bladder and left lobe of the liver, in rare instances from movable spleen or kidney, from tumors of the pancreas or the abdominal walls. This is, as a rule, not so difficult except where tumors are adherent, and in such cases we have to consider the symptoms of functional disturbance. The clinical picture of cancer of the stomach varies according to its location and to the presence or absence of stenosis. The latter is not always due to the narrowed condition of the pylorus, but may also depend upon the functional activity of the muscles of the stomach, which, in the later stages of the disease, have a tendency to atrophy. The symptoms are first those of dyspepsia and subsequently of severe catarrh; vomiting may be present or absent, and in the first stages blood is not frequently noticed; in fact, severe hematemesis is not very frequent. There is absence of free hydrochloric acid, and in the later stages presence of lactic acid, motor insufficiency is not, or only slightly observed in the earlier stages. Emaciation and cachexia, without any other characteristic symptoms, may finally complete the picture. Cancer at the cardiac region presents symptoms similar to cancer of the oesophagus; cases are not infrequent where the sound readily glides into the stomach in spite of the fact that a large tumor may be seated there, which, however, is in a state of ulcerative decay. Pain may be elicited by pressure upon the ensiform cartilage. Cancer of the pylorus soon reveals symptoms of steno-

sis, vomiting sets in early, and the contents are in a state of fermentation (fatty acids), devoid of free hydrochloric acid, lactic acid may be present. The patient soon shows signs of emaciation and desication of tissues, with attending symptoms of inanition. Anemia or cachexia may not be so noticeable. A tumor, as a rule, can be felt early and may be the only thing that brings him to the physician at a seasonable time. But even at such a stage it may be too late for successful operation, and it should impress upon us the necessity to look for symptoms which throw some light upon this trouble, even before the above signs manifest themselves.

Gluzinsky has called attention to an early symptom of pyloric stenosis before the tumor becomes evident. If he finds remnants of food in the morning after emptying the stomach with tube, he puts the question whether this is simply due to atony of the stomach walls or to a mechanical obstacle. In the latter instance, there is increased peristaltic action which, however, at such an early stage reveals itself only to a careful and painstaking observer. His advice is to examine the region of the stomach at frequent intervals through the day, or even at night, and watch the configuration of the scrobiculus. By patient observation he finds that one side, i. e., to the left of the rectus muscle, is more distended and prominent than at the right side. After a little while he finds this prominence shifting to the other side, without any perceptible sign of gastric movement. It may give one the impression of an hour-glass contraction of the stomach. Another symptom is also noticed when the hand is placed over the epigastrium, the distension alternates with relaxation of the walls of the stomach, as it does over a portion of the bowels above the seat of stenosis. Percussion also reveals a difference in the tympanitic sound, according to the degree of distension. These symptoms will become more distinct by insufflation of air into the stomach, and this procedure should be repeated at an interval of a few days.

Internal medication is not known of having ever cured a case of cancer of the stomach. Wine of Condurango, however, has temporarily improved a few cases to such a degree that for the time being I thought I had made an error in diagnosis. I recollect especially one case which unmistakably showed symptoms of carcinoma, with distinct cachexia, and which, after taking this remedy for about six weeks, improved so much in every way, and showed such a healthy appearance for about ten months, that his friends were quite amused about my hasty diagnosis. He died about 1½ years after his first visit with symptoms that left no doubt about the diagnosis.

Operative interference is, therefore, the only means to offer a cure for this trouble, but, as I have said before, permanent cures are quite rare, and I think mostly for the reason that operations could not be undertaken early enough.

The immediate mortality has of late been considerably reduced. Kocher lost four cases out of his last 24 operations for resection of the stomach. He therefore thinks that pylorectomy, done in time and as long as the cancer is movable, is not a dangerous operation. As to the permanent result, he states that out of his 76 operations, 18 are living yet, six cases live over three years, and one case is in good condition 8 years and another one thirteen years after operation. Woeffler, Czerny, Maydl and Chaput also mention cases that live five to seven years after resection. As you see, the permanent results are not so brilliant yet to create enthusiasm amongst surgeons in general, for such an operation, but in view of the hopeless condition of such patients, and with the prospects of better results if these operations can be made early, I feel like encouraging such a step under proper conditions.

Although the following case does not hold out much promise in regard to permanent result still, I think, it presents features of clinical interest that may justify me in reporting it.

A. S., farmer, age 53 years, had typhoid fever about 14 years ago, but since that time has been in good health up to the end of last May, when he noticed some difficulty in swallowing and re-

ceive treatment from some physician. I saw him about middle of August, when he stated that he had not been able to swallow anything for several days and he looked very much starved. A bulb sound of even the largest size could be passed into the stomach without any special resistance, and it gave him also great relief for about a week. After that time regurgitation of food and slime set in again, so that I washed out his stomach and emptied large quantities of mucus and dark blood. About one week later, in giving him test meals, I found large quantities of slime and noodles which he had eaten four days before. There was also absence of free hydrochloric acid. The introduction of the tube caused a slight arterial hemorrhage, but no pain. Examination with a tube, a few days later, brought to light some chicken meat which he had eaten two days before, There was also absence of free hydrochloric acid, and presence of lactic acid. Inflation of the stomach with air showed the greater curvature about one inch above the umbilicus. Patient had lost over ten pounds; he had a cachectic appearance, and I found in the left supraclavicular region an enlarged gland. Haemoglobin, 80 per cent.

The above symptoms led me to make a diagnosis of carcinoma of the oesophagus, or cardiac portion, and the finding of remnants of food also pointed to stenosis of the pylorus.

The proposition of an exploratory incision, and eventually resection of the stomach, was readily accepted. I prepared patient for two days and in that time washed out his stomach four times with a solution of boracic acid, also injected saline solution into the colon two or three times. On September 8th, 1902, I resorted to operation, following closely Kocher's method as described in his latest edition of operative surgery. The cardiac portion and also the fundus of the stomach were found in a normal condition, but the pylorus showed a diffuse hardness and small nodules. The lumen was contracted. About four inches of this portion were removed. Two nodules about the size of a bean obstructed the lumen, so that a lead pencil could hardly pass; they were not ulcerated, but proved to be of the cylindro-epithelial type of cancer. The operation lasted about two hours, and patient left the table in nearly as good a condition as before the operation. Temperature in the evening was 99¾, and pulse 90 per minute. After about 26 hours he spit up some dark, bloody fluid. It was necessary then to wash out the stomach twice, which gave him great relief. Bowels moved repeatedly during the second night. He took some fluid food on the third day and was in a very comfortable condition; temperature 99, pulse 75. Two weeks later he had some difficulty again in swallowing, but after his stomach was freed from large quantities of slime and blood, by thorough lavage, he began to feel like himself again. I found that a solution of peroxide of hydrogen or nitrate of silver have a great effect in reducing the tendency to slime formation.

In course of a few weeks patient showed symptoms of cancer of the oesophagus, although he was able to swallow even substantial food. He showed toward the last signs that an ulcer had communicated with the larger bronchia, by coughing up large quantities of pus and even fluid food. His cachexia increased and he died about three months after the operation.

URETERO-INTESTINAL ANASTOMOSIS.

Report of Experiments on Dogs—With Report of a Successful Case In Man.

BY JULIUS H. JACOBSON, M. D., SURGEON TO LUCAS COUNTY INFIRMARY.... HOSPITAL, TOLEDO, OHIO.

(*Read before the Northwestern Ohio Medical Association, Dec., 1902.*)

The deviation of the urine into the intestinal tract, by implanting the ureters into the bowel, is one of the infrequent operations in surgery. Infrequent, because the conditions demanding it are of rare occurrence. The operation has been done or is indicated, in cases of cancer, tuberculosis, and in congenital defects of

the bladder, notably in exstrophy; chronic cystitis; also in accidental severing of the ureters during operations, as is hysterectomy; and in some cases of hypertrophied prostate.

The principal danger of the operation, and the one which is always present, is ascending renal infection. By maintaining the natural uretero-vesical openings, for the anastomosis, the danger of ascending infection has been diminished, but unfortunately such improvement in the method is limited to cases of congenital defects only, the most frequent of which being exstrophy of the bladder.

The ureters have also been implanted into the skin, vagina and urethra, all of which, from the standpoint of infection, are less dangerous than bowel implantations, but they are incomplete operations at best.

The deviation of the urine into the bowel by vesico--rectal anastomosis, i. e., the anastomosis by the formation of a fistula between the bladder and rectum, must also be considered under this head. By this method the deviation is accomplished with the natural ureteral orifices unmolested, and ascending infection is less liable to occur. The work of Frank in this direction is noteworthy; he found that vesico-rectal anastomosis in dogs was not attended by rapid ascending infection. He performed the operation with the aid of his bone coupler, and whether his prophecy that vesico-rectal anastomosis will become as common an operation as gastro-enterostomy, remains to be seen.

In 1851 John Simon recommended and first performed uretero-intestinal anastomosis in man. He reasoned that in birds and reptiles the urine and feces had a common exit and that it therefore could be artificially produced in the human being. He also called attention to the tolerance of urine and sphincteric control of the rectum in persons who had vesico-rectal fistulæ as the result of operations for vesical stone. Simon's operation was made on a 13-year-old boy, for exstrophy. The anastomosis was accomplished by a crude yet ingenious method, which consisted principally of passing elastic ligatures from the ureters into the rectum, and allowing them to slough through; the patient lived about one year after the operation and died from exhaustion. The post mortem examination revealed the ureters blocked with calculi, together with serious disease of the ureters and kidneys.

In 1853 Roux, of Toulon, independently of Simon, advocated the operation for cases of exstrophy of the bladder, although he never performed it.

For about 25 years after this, no advancements were made, the operation was not done

It was revived in 1881 by Gluck and Zeller, through their experiments on dogs.

Other experimenters followed, notably Bardenhauer in 1886; Navaro 1887; Tuffier, 1881; Tissoni and Pozzi, 1888; Van Hook, 1893; Chaput, 1894; Mauclaire, 1895; Krynski, 1896; Boari, 1896, introduced and experimented with an anastomotic button; Matas, 1899; Frank 1900; and Peterson, in 1901. A large number of animal experiments are reported by these experimenters and numerous methods of implanting the ureters were devised. All experiments were attended by a very high mortality rate, the animals dying from peritonitis, pyelonephritis, etc.

Peterson's statistics of 60 dogs in which one ureter was implanted, experimentally, gives a result of 23 recoveries, or 61 per cent mortality, and in 68 dogs where bi-lateral implantations were made, 10 recoveries or 85 per cent mortality. The cause of death being from peritonitis, giving way of sutures, infection of kidneys, and uremia.

In 1878 Thomas Smith operated on a boy seven years old, for exstrophy of the bladder, anastomosing one ureter at a time. Death resulted after the second operation, post mortem examination revealing complete obliteration and hydronephrosis of the kidney from the first operation, death having been due to uremia after the second operation. Kuster in 1891 made the operation, but his patient died in five days. Cases more or less successful were reported by Chaput, 1892, Duplay and Trendelenburg in 1885, by Boari, Casti, Chalot, and Fowler, the

latter obtaining the best result in a bilateral implantation, the patient surviving the operation about four and one-half years.

Peterson gives a *resume* of 32 ureterointestinal implantations in man:

Number of patients operated upon....20
Number of operations.....33
Number of operators.....22

Conditions for which the operations were made were as follows: Chronic cystitis, cancer of the bladder, tuberculosis of the bladder, exstrophy of the bladder, uretero-vaginal fistula, vesico-vaginal fistula, and cancer of the uterus. Both ureters were implanted in 18 cases with a primary mortality of 8 cases or 44 per cent. Primary recovery in 10 cases, or 56 per cent. One ureter was implanted in 15 cases, with a primary mortality of 3, or 20 per cent, and primary recovery in 12 cases, or 80 per cent. Total immediate recoveries in all cases was 67 per cent, and total immediate deaths 33 per cent. Renal infection was noted in 11 cases. Of 11 cases remaining well, five were single implantations, which were well from six months to eight years, and seven cases were bi-lateral implantations, six of which lived from five weeks to one year, and in one instance patient was well after four and one-half years.

The results herein tabulated, showing the primary mortality at 33 per cent, and the uncertainty of subsequent renal infection in cases surviving this operation, makes the procedure one of doubtful utility.

As early as 1890 Tuffier came to the conclusion that in order to prevent ascending infection the natural ureteral orifices must be maintained. In 1894 Maydl reported two cases of exstrophy of the bladder operated by a method of his own, which consisted of implanting the vesical trigonum with the ureters attached into the sigmoid flexure of the colon. The idea being to preserve the ureteral orifices intact, thereby preventing the ascending infection. This operation, subsequently known as the Maydl operation of uretero-intestinal anastomosis, constitutes the only rational, practical and justifiable method of ureteral implantation.

Resume of 36 cases of uretero-trigono-intestinal anastomosis—Maydl operation:

Number of operations, 36.
Number of operators, 16.
Operations for exstrophy of the bladder, 32.
Epispadias without exstrophy, 2.
Exstrophy and adenoma of bladder, 1.
Incontinence caused by funnel-shaped urethra, 1.
Recovery in 31, death in 5.
Percentage of recoveries, 86; and percentage of deaths, 14.
Average frequency of evacuations, 4 to 5 hours.
Number of cases living and well at end of one year, 19.
At end of two years, 10.
At end of three years, 7.
At end of four years, 4.
At end of six years, 1.
At end of seven years, 1.

Petersons' general conclusions were as follows:

1. The primary mortality of uretero-intestinal anastomosis, both in experimental work on animals and in man, is exceedingly high.

2. The best technique is that requiring the least amount of suturing of the ureters themselves.

3. All efforts to prevent ascending renal infection in animals or in man, where the ureter has been implanted without its vesical orifice, have proved futile.

4. It is impossible to determine in advance the extent of the infection which will result from uretero-intestinal anastomosis.

5. Hence the operation is unjustifiable, either for the purpose of making the patient more comfortable, as in exstrophy of the bladder, vesico-vaginal or uretero-vaginal fistula, or for malignant disease of the bladder.

6. The results of uretero-intestinal anastomosis, through the formation of vesicorectal fistula, have not been favorable up to the present time. ffl

7. The success of Frank's experimental work in vesico-rectal anastomosis justifies the expectation that the future results of the operation will be more satisfactory.

8. The primary mortality of uretero-

trigono-intestinal anastomosis is low for an operation of its magnitude.

9. While it cannot be denied that ascending renal infection may occur after this operation, the infection, as a rule, is of such a type that the chances of the individual's overcoming it are good.

10. Hence, the operation of implanting the vesical flap with its ureteral orifices into the intestine is a justifiable surgical procedure.

11. There is no valve guarding the vesico-ureteral orifice; nor does the circular muscle layer of the ureter, nor do the bladder muscles themselves, act as a sphincter.

12. It has been abundantly demonstrated by experimental and clinical work that the rectum tolerates the presence of urine and acts as a good substitute for the bladder, and that good control over the anal sphincter will be maintained.

REPORT OF EXPERIMENTS UPON DOGS.

During the summer of 1901, a series of experiments upon dogs were conducted by Dr. Gillette and myself at the Lucas County Hospital. The object of these experiments were to find, if possible, a rational method of implanting the ureters into the intestinal canal when they were divided anywhere in their course between the bladder and kidney. About thirty dogs were taken for the experiments. The operations were all conducted in as strictly an aseptic a manner as possible, the technique of which was as follows:

Anæsthetics employed were ether and the administration of chloretone per stomach. In a few instances chloroform was used, but on account of its toxic effects it was abandoned. Ether was given through a cone made of paper and covered with towels, which was placed over the mouth and nose, thus enabling the anaesthetist to control the animal before complete anæsthesia was produced. Operating under the effects of chloretone proved a great success. The amount of the drug used was in each case varied; the rule was to give 1-10 gramme per kilo in weight of dog (about two grains to every pound in weight of the animal). This was administered about two hours before the operation, by placing it on the tongue of the dog and holding its head so as to make it swallow. At the time of the operation the dog would be fast asleep, thus permitting the operators to put the animal on the table without any struggling, and which, of course, allowed the most extensive manipulations in the abdominal cavity. During the operation under this anæsthetic the animals evidenced no shock. The heart's action and breathing remaining good, and thus enabling the operator to perfect his work in an easy, deliberate manner without the fear of having the dog die under the anaesthetic, before the completion of the operation, as had occurred often before.

After the operations the animals would sleep from a few to as many as forty-eight hours, this latter being the worst feature of the method. If the animals regained consciousness in two or three hours after the operation, they were able to care for their own wounds by licking them and keeping them clean (which avoids infection), while those dogs which did not regain consciousness in from twenty-four to forty-eight hours after, had, by this time, such extreme infection so as to render subsequent recovery slow or impossible.

The animals were placed on their backs, tied into a trough (V-shaped), placed on a regular operating table, permitting them to be raised to the Trendelenburg position, a procedure which greatly facilitated the work on the bladder and ureters. The abdomen was shaved and scrubbed, followed by the use of solutions of permanganate of potash, oxalic acid, bichloride of mercury and alcohol. The entire dog was then covered by sterilized sheets, leaving only the operation site exposed. Instruments, sponges and dressings were sterilized in the usual manner; likewise were the operator's hands.

Great care was exercised during the operations to avoid soiling the peritoneal cavity, and where it was possible the entire operation was made outside of the abdomen; in the majority of instances the rest of the cavity was walled off from the operation site by sponge packings, and after the completion of work the entire cavity was irrigated with normal

salt solution. Abdominal incision was closed by interrupted silkworm gut sutures. No dressings were applied, but the animals were allowed to care for their own wounds. Food and water was withheld for a few days, when they were given again.

The technique of these experiments has been given somewhat in detail, not that it applies so much in particular to the subject in question, but for the use of those members of the society who desire to do work of this kind.

Without giving an exact account of the various methods adopted for anastomosing the ureters with the intestine, only a general mention of them will be made. Our experiments as to the method of implantation may be divided into four general classes: (1) Implantation of one or both ureters by severing them from the bladder and anastomosing them directly into the rectum, with or without extirpation of the bladder. (2) Implantation with the base of the bladder attached, after Maydl. (3) Implantation by burying the ureters in the intestinal wall, before entering them into the lumen of the gut. (4) Implantation of the ureters into the appendix vermiformes.

These operations are much more difficult in the dog than in man; the ureters are necessarily smaller in size, the danger of infection being greater and the greatest care and skill must be exercised in suturing.

The results obtained from these operations were bad, the mortality being high, the animals living from one to seven days after the operations, excepting in one instance in which the animal lived for about two months. The cause of death in all cases was either peritonitis, ascending infection to the pelvis of kidneys; from pulling out of the ureters after implantation, and from intestinal obstruction.

These experiments verified the results of other investigators in this field, as the same results were obtained and practically the same conclusions drawn; i. e., that successful ureteral implantations into the intestine, without the use of the trigonum, by methods heretofore used is practically impossible. A distinct advance, however, was made and one which, we believe with further experimentation and investigation, offers prospects of success, i. e., the utilization of the vermiform appendix for the anastomosis. The idea was first suggested by Dr. W. J. Gillette after we had made a number of unsuccessful implantations and were somewhat discouraged by the results obtained.

Immediately we began implanting ureters into the appendix, but even here we meet with no signal successes, excepting in one case where the right ureter was implanted into the appendix, the dog recovering from the operation and voiding urine from the rectum. The animal lived for about two months when it was killed, the post mortem examination, much to the chagrin of all concerned, revealed complete obliteration of the right kidney with its ureter, as a sequence of ascending infection.

It is a difficult matter to form a just estimate of uretero-appendicular-anastomosis, as it cannot be carried out in the dog and other lower animals, as it could be done in man.

The appendix of a dog is a short, broad, quadrangular, cul-de-sac, about ½ to 1 in. in length, and about of the same width; this renders infection from the appendix of a dog, just as liable as from any part of the intestinal tract.

In man the shape and length of the appendix as well as its situation seem to make it an ideal place for the anastomosis, whenever it is necessary to implant one or more ureters into the intestinal tract without the trigonum of the bladder.

We are indebted to Drs. Yeagley, C. S. Miller and B. Becker for the assistance they rendered in the work.

REPORT OF A SUCCESSFUL CASE IN MAN.

The patient is a male, aged 29, who entered the Lucas County Infirmary Hospital April 2, 1902. The father died of Bright's disease; the mother of so-called dropsy; brothers and sisters all living; no tuberculosis or cancer in the family.

The patient relates that since birth he has had no control over his urine; it has always dribbled away, but he did not know what it was. He was operated on, when still a child, in Griefswald,

Germany, but can not give the exact nature of the operation. He has always been obliged to wear some sort of a receptacle to hold the urine, otherwise he has enjoyed the best of health. About one year previous to his entrance to the hospital, he underwent several operations for the relief of his condition. These operations consisted in the endeavor, by means of plastic operations, to cover the defect in the bladder, but they were not successful. At the same time he also underwent an operation for the relief of a large left inguinal hernia, which was thereby cured. He states that previous to these operations his genitals consisted of a rudimentary penis which was double, and that the urine flowed from one side of the organ. The rudimentary penis was removed during the plastic operations.

Examination of the patient, at time of entrance, revealed a well-nourished, tall, muscular individual presenting no emaciation; heart, lungs, liver and spleen were apparently normal. Above the symphysis pubis is an area of deep red tissue looking like granulation tissue and covered by a purulent secretion, which on close inspection proves to be a part of the bladder; from the lower part of same the urine can be seen to spurt at intervals of thirty to sixty seconds; both ureteral orifices can be seen and ureteral catheters passed into them. The abdominal wall, as well as the anterior wall of the bladder, is absent, which permits the posterior wall to prolapse forward.

The diagnosis of exstrophy of the bladder was easily made. Catheterization of the ureters, and examination of the separate urines gave the following: Left kidney—urine runs very freely through thecatheter and is of a clear amber color, acid in reaction, highly albuminous; on microscopic examination, epithelial cells, leucocytes, urates, but no casts, are found. Right kidney—urine is of a dirty grayish color, flocculent and opaque, containing albumin, but not so much as is present in the other kidney; on microscopic examination, there are found great quantities of pus, red blood corpuscles and epithelial cells, but no casts. The urine examination reveals mainly the following facts: Both kidneys are the seat of chronic inflammation; the right one more so than the left, which is the result of ascending infection.

OPERATION.

A uretero-trigono-intestinal anastomosis, modified after Maydl, was made on April 19, 1902, Drs. Brewer and Steinfeld assisting. A mixture of chloroform and ether was the anesthetic used. The patient was prepared in the usual manner, while special care was given to the sterilization and preparation of the exstrophied portion of the bladder, which was the infected area to be feared. A ureteral catheter was passed into each ureter; the incision made immediately above the bladder about four inches in length and the peritonal cavity opened; the patient raised to the Trendelenburg position. The intestines were held back by sponges. The incision was carried downward through the center of the bladder (between the ureters), dividing it in two. The ureters could be plainly seen, running outward, backward and upward; with the catheters in them were surprisingly large and easy to manipulate, which greatly facilitated the work. Each ureter was dissected free by cutting it away from the bladder, leaving a circle of bladder tissue about one-half inch around the vesico-ureteral openings, thereby leaving the natural ureteral openings into the bladder unmolested. The peritoneum on the right side was incised and reflected along the course of the ureter, permitting the ureter to be lifted from its bed. The peritoneum was further stripped from the posterior wall of the pelvis around to the rectum. An opening into the right lateral side of the rectum was next made, at about the level of the sacral promontory, into which the ureter with bladder-wall attached was sutured; first mucosa of bladder to mucosa of rectum by a continuous silk suture (black iron-dyed silk), then serosa of bladder to serosa of rectum were also applied to make the anastomosis more secure. The reflected peritoneum was finally sutured back into place (by a continuous catgut suture) making the entire anastomosis covered by peritoneum

and placed extra-peritoneally. About three and one-half inches of the lower part of the ureter was placed in a new position. The same procedure as described for the right side was made on the left side; the anastomosis on the left side being made opposite to the one on the right, a trifle lower. The peritoneal cavity was thoroughly irrigated with salt solution, sponges removed and patient lowered to the flat position. All of the remaining portions of the bladder walls were extirpated, hemorrhages being controlled by ligatures and cautery.

The incision was closed by interrupted silkworm-gut sutures supplemented by layer suturing of catgut. In the lower angle of the incision, where tension was great, a few tension sutures were applied. A large drainage tube was left in the lower angle of the wound, and the whole abdomen supported by broad adhesive plaster strips.

After the operation the patient suffered severely from the shock, but, under stimulants and salt infusions, recovered. Immediately after the operation, the urine seemed to irritate the rectum, the desire to urinate being constant, which gradually disappeared as the rectum became more tolerant, until a tolerance of three to four hours was obtained. The abdominal wound became infected as was anticipated, suppuration was profuse which ceased after a time, allowing the wound to heal gradually, until at present it is practically closed.

The patient's condition at present is as follows: He is able to get around with no inconvenience; does considerable work about the hospital, wearing an abdominal bandage; voids urine through the rectum every three hours and states that he can hold it as long as six hours, if he wishes to do so. The bowels move regularly, and the arine is voided independent of bowel evacuations. He states that sometimes during the night the urine is passed unconsciously, during sleep. About three weeks ago he relates having passed a stone from the rectum, the nature of which was not determined, but may have been a calculus formation or lime deposit about the opening of the ureters into the rectum. The abdominal incision has united and is practically healed; in the lower angle is a small area of granulation tissue where the bladder was extirpated; this is dressed daily and is rapidly closing. In the upper angle of the incision a slight hernia has developed, which is especially noticeable when the patient is in the upright position.

ACUTE GLANDULAR FEVER.

BY L. MARSH DOLLOWAY, M. D., TOLEDO, O.

(Read before the Lucas County Medical Society, December, 1902.) .. ..

Comparatively a new disease, and only now finding its way into books and practice and pediatrics, Acute Glandular Fever of children, was first described as a distinct affection by Pfeiffer in 1889, though cases had already been reported by Filatow. After Pfeiffer's paper calling attention to the disease, under the name of Druesen-Fieber, various articles have appeared at intervals in foreign languages, but none in English until that of Dr. J. Park West, of Bellaire, in December, 1896. Since that time considerable work has been done in connection with the subject, and the names of West and Hannill, in this country, and Dawson Williams, in England, have been particularly associated with the study of this condition.

The disease occurs either sporadically or in epidemic form, as in West's first series of cases where 96 children between the ages of 7 months and 13 years were affected. The symptoms of the affection are so characteristic that it seems strange that it could so long have escaped recognition. The attack begins abruptly, with swelling of the lymph glands of the neck; pain and stiffness on moving the head are observed, and the patient, if a child, desires to be left undisturbed. As a rule the posterior auricular glands on the left side are the first affected. At the same time, or usually somewhat later than the cervical glands, other lymph nodes in various parts of the body become affected. Thus, though the deep cervical nodes, the suboccipital, submaxillary and supra

hyoid are involved first and attain a larger size; the axillary, epicondylar, inguinal, and even the popliteal nodes also enlarge so as to become palpable, and are tender on pressure. While in some cases cough and dyspnoea, of a mild type, show that the mediastinal and bronchial glands are affected, and in other cases the occurrence of severe abdominal pain with nausea and vomiting indicate that mesenteric nodes have not escaped. On deep palpation these may, indeed, often be felt, as may also an enlarged liver or spleen. It would, however, be exceptional to find all these glands involved in any one person.

Concurrently with the enlargement of the lymphatic glands, the temperature rises rapidly to 101 to 103, or even to 104.5, in a recent case of my own. The sufferer may or may not present the appearance of being very ill; and the cough, abdominal pain and vomiting may or may not be present; but in all severe cases there is an obstinate constipation, pointing to the fact that the solitary and aggregated lymph-nodules of the intestine, partaking as they do of the structure of lymph-glands in other parts of the body, share also in the disease. With this universal glandular involvment and fever, there exist all the symptoms of an acute infectious disease; anorexia, pain in the back and limbs, headache, scanty urine, etc. There may be some dysphagia and on palpation the retropharyngeal glands may sometimes be felt enlarged. As these glands are connected by a chain of nodes with the tympanum, this anatomical fact accounts for the frequency of acute otitis media during the course of the disease. The tonsils are usually enlarged, but are not changed in color nor actively inflamed; the pharynx is, however, not unusually slightly reddened for the first one or two days. The glands, as a rule, are only moderately sensitive to pressure, the skin covering them is normal, and suppuration is rare, though Osler quotes Neumann as reporting thirteen cases. I have never seen it. After four days, according to West, but in about one-half that time, in my experience, the glands first affected become stationary, while those involved later still enlarge for 12 to 24 hours longer, at the end of which time the first glands begin to lose their sensitiveness and slowly decline in size.

Three, four or five days after the invasion, the fever falls by crisis, or if not actually by crisis at least falls quite rapidly, and all the symptoms subside save the enlarged glands, which do not disappear for three or four weeks. The patient is left weak and pale and the return to health is slow. It is usual for the crisis to be accompanied by a fetid diarrhœa.

Among the complications are suppuration of the glands, retro-pharyngeal abscess, and acute otitis media. There is no eruption, usually no coryza, angina, or stomatitis. The prognosis is always favorable, and the treatment recommended is usually small doses of calomel during the height of the trouble, and later iron tonics.

Though I have never seen the disease reported as occurring in adults, and its very name, Acute Glandular Fever of children, would indicate that it does not do so, yet believe this to be an error, and wish to report four cases in adults ranging from 24 to 42 years of age, and also to call attention to two other facts which I belive have not heretofore been mentioned in the literature of the disease.

As I wish to be brief I shall only report one case in detail and call attention merely to the salient points of the others.

Case 1. Male; family history good; previous diseases negative; present health, good, but at time of attack just recovering from a mild remittent fever. For three days the right post—auricular glands were slightly enlarged and tender, but with no other symptoms. On the morning of the fourth day awoke with all the glands enlarged and sensitive, temperature 103, constipation, general muscular soreness, anorexia, and headache. On the fifth day, severe neuralgia of the supra orbital region, due probably to pressure on the nerves from the enlarged glands, and a development of bi-lateral acute otitis media progressing to pus formation and perforation on the left side. The treatment was small doses of red mecuric iodide and on the seventh day the glands became stationary and the symptoms began to subside. By the end

of two weeks more the glands were reduced to one-third their maximum size, and a week later were still further reduced, but after that time they became stationary and have remained plainly palpable, some even large enough to be seen up to the present time, a period of three and one-half years. At times the glands enlarge slightly and become somewhat tender.

Case II. occurred in a lady 42 years of age, at the same time as the previous case, and the glands likewise remain enlarged at the present time.

The third and fourth cases occurred only one year ago, but in both the glands are still enlarged, and one patient, a young lady of 24, returned for treatment some three months after her attack, because the enlarged glands were tender, and the sub-maxillary lymphatic glands showed plainly enough to constitute a disfigurement.

This fact, that in adults at least the glands may remain enlarged indefinitely, I believe to have considerable clinical importance as the diseases characterized by a chronic enlargement of the lymph-glands are all serious, and to mistake this condition, when due to glandular fever, for a similar enlargement due to Hodgkin's disease, cancer, tuberculosis, syphilis, septic ear trouble, etc., would be most unfortunate. As the history of acute gland fever is highly characteristic; this mistake could scarcely occur if inquiry were made with its possibility in mind. In the four cases here reported, I believe that these causes for the permanent enlargement of the glands were definitely excluded, and particularly the possibility of its being due to syphilis.

The third point I wish to mention is that in some cases—it has been noted in three of my own, where I have had the opportunity to examine the patient before the onset of active symptoms—the mastoid glands were enlarged for from two to three days before the first symptoms of the disease were manifest elsewhere, and this suggests a period of the disease when the infection may be localized, only later spreading and affecting other portions of the lymphatic system. The location of this point of first appearance in glands directly connecting with the tonsils offers the possibility that there is here another disease which may be laid to that open door for infections of various sorts, the tonsil.

PNEUMONIA.

BY S. A. HITCHCOCK, M. D. ELIDA, OHIO.

(Read before the Northwestern Ohio Medical Association, Dec., 1902.)

We, as practitioners of medicine, who almost make it our daily business to consult Wood, Flint, Watson, Osler, Anders and many other great and good men who have long since joined the silent majority, feel inclined to give them great praise for their valuable assistance in the treatment of the above named disease.

Following up the instructions of these great and good men, we have only been fairly successful in the treatment of this disease. The articles as published in *"The Journal of the American Medical Association,"* November 15th, 1902, by Edward P. Wells, M. D., Chicago; Jas. J. Walsh, M. D., New York City; H. B. Farill, M. D., Chicago; James Tyson, M. D., Philadelphia, and A. A. Stevens, M. D., Philadelphia, on the subject of pneumonia in its various forms, should awaken the medical profession to a high sense of their duty in the very dangerous and almost (with very few exceptions) fatal disease.

Following up the above articles is a symposium on pneumonia, (five articles) which is noted by E. Fletcher Ingalls, M. D., Chicago. There is a belief that the cause of pneumonia is not very greatly influenced by treatment, yet there are a few general practitioners who would be willing to admit that they could do nothing to shorten the attacks of this disease or improve the chances for recovery of those affected by it. Nevertheless the fact that the disease is self-limited, and that among large numbers treated in hospitals those who have received little or no treatment appear to have done about as well as those who have received much, seems to justify the belief.

However, I may say that I do not be-

long to the class who believe that nothing can be done to improve the condition of these patients. In most diseases, but especially those of a self-limited character, the tendency is to recovery, and if the patient's powers of resistance are sufficient to withstand the toxins of the disease for a sufficient length of time, this result will be obtained. This is particularly true in all self-limited diseases like pneumonia; but while we must admit that nature's tendency is to cure, still we must recognize that the accumulated clinical experience of centuries leads the great majority of physicians to believe that nature may be aided in this process.

When we consider the frightful mortality of pneumonia, we may readily admit that the treatment is often unavailing and the study of the various methods that have been employed will show that of the methods that have been recommended and adopted with the most confidence, some are certainly useless; others furnish no good reason for the confidence that has been placed in them, and still others are positively injurious and doubtless have in many cases hastened the fatal result.

Of young, vigorous subjects, seventy-five per cent. or more recover; whereas of the aged or those enfeebled by dissipation or those who are in a poor physical condition from other causes, the prognosis is much more grave.

The following is the record of 338 cases treated in *Cook County Hospital* (Chicago) in fifteen months, ending April 1st, 1902:

In 72 under 25 years, the mortality was 22 per cent.

In 134, 26 to 40 years, the mortality was 30 per cent.

In 99, 41 to 60 years, the mortality was 50 per cent.

In 22, over 60 years, the mortality was 70 per cent.

The average mortality was 36 per cent.

E. Fletcher Ingalls, M. D., speaks of the disadvantages of hospital treatment which is very interesting but can not be reported in this paper on account of time and space.

PROGNOSIS.

The prognosis is influenced by the condition of the pulse, temperature and respiration, as shown in the following analysis of these 338 cases, which demonstrates that in this disease some die in whom most of the symptoms are comparatively mild, while others recover in spite of extremely grave conditions. I will omit the analysis of these cases, as it would make the paper too lengthy.

Remembering how often pneumonia is the cause of suppurative pleurisy, it is surprising to note that in these 338 cases only one case is reported to have developed empyema.

VARIOUS MEDICAMENTS USED.

Among the various measures often employed in the treatment, we notice the use of ice caps, the Leiter Coil and cold packs, alcohol rubs for delirium or to reduce temperature, and normal salt solution given either by hypodermic injection or by an enema as a stimulant. According to the history of these 338 cases, bleeding was employed in only one case.

Among the numerous medicines administered, certain drugs were employed in large proportions of the cases, either alone or combined. They are as follows:

For regulation of the bowels: Magnesium sulphate was used in 183, or 54 per cent. Calomel (usually combined with sodium bicarbonate) in 138, or 40 per cent. For their action on the heart: Aconite or Veratrum Viride in 98, or 25 per cent. Strychnia or Nux Vomica or their compounds in 284, or 84 per cent. Nitroglycerine or ether in 57 or 17 per cent. Whiskey, brandy, port wine or spirits of cologne in 193 or 57 per cent. Digitalis, Spartein, Caffein or Strophanthus in 114 or 33 per cent. For their action on the heart or to relieve cough: The ammonia compounds in 118, or 34 per cent. Atropin, hyoscyamus or hyoscin, hydrobromate in 87, or 22 per cent. For their quieting effects: Opiates as codein, morphine, heroin, tr. of opium or Dover's powder in 170 or 50 per cent. The bromides of potassium, sodium and ammonium in 52 or 16%. Guiacol

carbonate was used only in 19 or 5 per cent.

Liquid diet should be given regularly and in sufficient quantity although we need have no fear of the patient starving to death. Yet we must be careful not to overload the stomach and thus add acute indigestion with ptomain poisoning to the burden which the patient is already carrying. As a rule, where it can be borne, half a pint of milk or its equivalent should be given to an adult every three hours, and it should not be forgotten that the administration of nourishment every half hour or hour is often injurious, because by so doing the stomach is kept in a constant ferment with no time for rest, so that soon the appetite is lost or nausea and vomiting occur, or the food being passed onto the bowels undergoes decomposition, tympanites results and diarrhoea may follow.

It is important for the physician to ascertain accurately how much nourishment is being given. It is a common experience to ask the friends or nurses how much food the patient is taking, and to have them answer that he is taking a large quantity, when in reality he is not taking more than a couple of ounces once in three or four hours, or even less frequently.

We all know from personal experience how weak one may become by abstaining from one or two of the ordinary meals of the day, and as in pneumonia it is of prime importance to conserve the patient's strength, we should be careful that all of the food is taken that can be well digested.

Beef juice, beef tea, mutton broth, clam broth, chicken broth, or oyster soup all possess more or less nourishment, and any of them may be substituted for milk a part of the time to prevent the patient from becoming tired of milk.

Albumen water, prepared by beating the white of an egg in water, may be used in the same way. Barley water or rice water, prepared by boiling these grains for several hours in water until the latter becomes of a milky appearance, and seasoned with lemon juice, if the patient desires, may take the place of a certain quantity of milk.

When milk is not digested, as shown by disturbance of the stomach or the collection of gas in the bowels or by the condition of the stools, it should be tried in a partly digested form, and when it is disliked its taste may be altered and the after-taste prevented, at least to a considerable extent, by combining it with Vichy water.

Unfortunately in some cases the stomach rejects all food and then it is very difficult to sustain the patient. Under such conditions high rectal enemas should be given three times a day of partly digested and easily assimilable nutriment, in quantities of not more than four to six ounces, and these should not be given oftener than three times a day, for if given more frequently the rectum speedily becomes intolerant and they will not be retained.

LAXATIVES.

Many physicians favor beginning the treatment of pneumonia with a mild mercurial purge or a saline laxative. Nevertheless I believe that vigorous catharsis is harmful, except in rare instances in very robust persons, although it is desirable that the patient should have one movement a day. In these hospital cases noted above, salines were employed in 54 per cent. and mercurials in 40 per cent. of all cases.

It has been stated that in this disease the liability to death is in direct relation to the cathartics that have been taken—that is, vigorous catharsis, speedy death.

SURROUNDINGS AND LOCAL TREATMENT.

The patient should, if possible, have a large airy room with free ventilation, but drafts should be avoided and the chest should be carefully protected, with a view not only to relieve pain but prevent the extension of the disease.

It may be argued that we have no means of knowing that the extension of the inflammatory process can be prevented in this way. Nevertheless we do know that the continued application of cold or of hot fomentations will greatly modify the progress of inflammation in other parts of the body, and most of you are familiar with healthy people in whom a reduction in temperature of a few degrees in the surrounding atmosphere will cause much discomfort and pain, and if they do

not speedily escape from the condition they are liable to attacks of acute rhinitis, bronchitis or rheumatism. Therefore with a patient depressed by so grave a disease as pneumonia, it seems important to afford extra protection.

The chest may be protected by flannels, by pads of wool or cotton, or the time-honored large jacket poultice enveloping the whole side may be employed, if it can be kept constantly warm and can be applied without causing the patient too much discomfort.

Poultices that are applied every three or four hours are cold most of the time and doubtless do more harm than good, and in not a few cases the frequent disturbance of the patient, who is in need of absolute rest, must have a harmful effect. Therefore these should not be employed except in especially favorable cases. Under suitable conditions there can be no question that poultices will frequently greatly diminish the pain, and it is believed by many physicians that they, to some extent, retard the progress of the disease of the lung.

In lieu of poultices, many physicians have within the past few years, employed soft putty and like preparations, which are spread on the chest to a depth of from 1-8 to 1-4 inch, and covered with a cloth. These are said to have effects similar to poultices in relieving pain, and it is claimed that they also have some influence in checking the progress of the disease. In the great maority of cases, I have found the oil silk and cotton jacket much more serviceable than the poultice or any of its substitutes.

The jacket keeps the chest warm and moist, and if properly made it can be easily removed for sponging or for watching the progress of the disease.

HEART SEDATIVES.

Believing that pneumonia is a fateful disease that can no more be altered in its course than can typhoid fever, the majority of physicians have entirely abandoned venesection and the use of such heart sedatives as aconite, veratrum, triturate of potash and antimony, iodin of potassium, etc.

Nevertheless cases occasionally occur in robust individuals where the pulse is strong and full, the temperature high and dyspnoea developed early, in which some of these agents could be beneficially used for a short time, care always being taken not to greatly deplete the patient and not to exhaust his strength. Such sedatives were given in 25 per cent. of these 338 hospital patients (though probably many of them were treated with very small doses in the homeopathic wards.) Such treatment sometimes gives immediate relief, and it possibly renders the course of the disease less severe. But all will agree that no depressing agent should be used after the disease is thoroughly established. In those very rare cases where there is undoubted plethora, and when there is great dyspnoea with much congestion, the drawing of six or eight ounces of blood from the arm appears to be most beneficial.

Bleeding was practiced only once in all of these cases.

PAIN.

To relieve pain, the application of heat to the chest, as already recommended, should first be practiced, especially in debilitated patients; but in others, better results may be obtained from cold.

The latter may be applied by the ice bag or the Leiter coil. The coal tar antipyretics have also been recommended for this purpose, and in the beginning of the disease, when the temperature is high and the patient in much discomfort, provided the heart is strong, great relief will often be obtained from the administration of from five to ten grains of phenacetin, and I believe it can be given without harm to the patient. However, the dose should not be frequently repeated, and remedies of this class should not be given at all after symptoms of heart failure appear—or, in other words, with a pulse running at about 120.

Physicians too commonly quickly resort to the administration of opiates to relieve this symptom, forgetting that in fully 50 per cent. of the human family opiates disturb the digestion, check the secretions, and within a few hours make the patient worse than he was before; forgetting also that opiates benumb the respiratory centers and increase the carbonic acid poisoning, which is so potent

for harm in pneumonia. Nevertheless, there are some cases in which opiates must be given, but it should be as a last resort and administered with great caution.

COUGH.

Cough is not infrequently a distressing symptom, especially when the pneumonia is combined with a sharp attack of pleurisy and something must be given to diminish the convulsive efforts which cause the patient so much pain and which undoubtedly increases the congestion of the lungs.

For this purpose ammonium bromide in doses of ten grains every two to six hours, combined with hyoscyamus in moderate doses, has been the most satisfactory in my hands. But here again we will sometimes have to resort to opiates, and when we do, that preparation that is least likely to disturb the digestion or to give the patient discomfort should be employed. I like Codein best.

Atropin or hyoscyamus was used in 22 per cent. of the hospital cases above noted.

INSOMNIA.

For this condition, bromide of ammonium.

The hospital records show that bromides were used in 16 per cent. of the 338 cases. Sulphonal, trional, chloral, chloretone, have all been recommended for the same purpose.

Here too opiates are recommended and employed by many physicians, but the treatment appears to be most injudicious. Full doses of whiskey sometimes produced the happiest effects in securing sleep for these patients.

TEMPERATURE.

Two prominent indications in the treatment of pneumonia are acknowledged by nearly all physicians to be reduction of high temperature and sustaining the heart.

A temperature below 102 degrees is not generally considered injurious, and no special efforts are made to reduce it, but when it goes beyond this, it is a common practice to have the patient sponged with the hope of reducing the heat one or two degrees. This treatment is repeated every three or four hours, if necessary.

SPECIFICS.

Are there any medicines which possess a specific influence for the cure of croupous pneumonia? I fear not; yet the remarkable effects claimed for creasote, carbolic acid and the salicylates of sodium and ammonium, and even for chloroform and the reliance placed on this class of remedies by Andrew H. Smith, would seem to indicate that they possess a power over pneumonia similar to that of quinine over malarial fever, and of the salicylates over acute rheumatic fever.

From the various facts and opinions collected, Smith is induced to say, (20 Century Practice of Medicine, Vol. 16, Page 99), "We may reasonably expect benefit in a considerable proportion of cases from the use of means addressed directly to the germ present in the lungs." The practical question to be solved is, what agent will act most powerfully on the specific organism with least inconvenience or danger to the patient? Thus far the most efficient and least harmful drug appears to be the Salicylate of Sodium, employed by Leigel.

As we have seen, 72 consecutive cases, many of them most unpromising, have been treated with it without a death. This is a very remarkable record, and certainly recommends the treatment most strongly for further trial.

Apart from the experience of Leigel, it does not appear unlikely that a drug which is capable of producing such decided results in acute rheumatism should be effective against an organism so sensitve as the pneumococcus. Leigel did not observe any depressing effect from the salicylate of sodium in the doses he employed (eight grains daily), but such, if apprehended, could be guarded against by the use of strychnia, etc.

A PLEA FOR EARLY TREATMENT

Of the Alcohol, Morphine, Cocaine and Allied Narcotic Drug Habits.

BY AUGUSTE RHU, M. D., MARION, OHIO.,

MEMBER OF THE OHIO STATE AND AMERICAN MEDICAL ASS'N., EX-PRES. OF MARION CO., MED. SOC. ETC.

(Read before the Northwestern Ohio Medical Association, Dec., 1902.)

Say what we may concerning the alarming increase of morphine and allied drug habitues, the fact still remains that more attention should be given to this diseased condition. A hopeful sign of the times is that the term "habit," is fast becoming obsolete and the more proper designation of (morphine) disease, being now generally admitted by all neurologists. The pathological lesions of the morphine, cocaine, heroine, dionine and derivatives of the opium group, including alcohol, are chiefly centered on the nervous system and in particular on the sympathetic, with later progressive lesions affecting the cerebro-spinal system. Any physician fully knows how morphinism is on the increase and enslaving thousands of the fairest men and women throughout the world, also that this class of diseased habitues are difficult to treat successfully, and need special management and care.

I herewith epitomize from a communication appearing in a recent number of *The Outlook,* the following, by Mrs. F. L. Baldwin (a well known American missionary), concerning her experiences in China, and who says in part:

"At one time opium was a contraband article in China, only two hundred chests annually were allowed to enter the Chinese Empire, solely for medicinal purposes, otherwise a strictly forbidden article of trade, etc. But the East India and the Eastern trade learned that the Portuguese profitably smuggled opium into China. India had vast plains upon which the poppy would flourish. Every inch of ground was needed to keep famine from India's poor, but what of the hunger of the poor as compared to the greed for gold? The East India company proceeded to compel poppy-planting in India, although it impoverished the soil, and for years smuggled opium into China. After a time the English government suspended said company, and we then had the spectacle for many years of the great Christian English government engaged in smuggling a deadly poison into a helpless country. The Emperor of China finally losing all patience after long years of defiance of his laws and ruin of his people, sent a commissioner, Lin, from Peking to Canton, with full power summarily to execute all Chinese in league with the smugglers and to confiscate all opium he could find. Lin with great moderation, only shut up in their factories the English and American merchants whose hands were black with the trade. He supplied them with food, but seized their opium, 20,253 chests, put it in pits filled with water and then floated it out to sea. An opium tea party!

Then England came with her cannon and soldiers and we had the opium war as known in history, which Lord Elgin declared, "the most iniquitous war ever waged." But might conquered right and England compelled China to pay $21,000,000 for the war and opium destroyed, and took her southern port, her beautiful island of Hongkong, today one of England's chief colonies, and worse still, compelled China to admit opium as an article of trade. To this moment this awful curse and English government monopoly is forced upon China.

Many times, as I have urged my sedan-chair bearers not to use opium, have they returned me the answer, "why do you foreigners bring it to us?" Miles in the interior, where a foreigner never lives and rarely is seen, his face suggests to the native the white man's curse. When a mob years ago in China drove the foreigners out of one of their cities, they cried after them: "You burned our Summer Palace; you killed our Emperor; you are poisoning our people; you are devils!"

"Second, what of the great Protestant nation, the United States?

"Have we observed the golden rule towards a friendly nation? Not by any means. We just bowed assent to all England did. Our merchants shared in the traffic and the iniquitous indemnity forced from China; and after the Chinese government was compelled to admit opium as an article of trade, every chief American tea firm, save one, had its opium treasure-vault and made its greatest profit on sin. I say, save one; let me write that name in full, Oliphant & Company stood alone among the mercantile firms of all nationalities with hands clean of the wicked traffic. They would not allow a chest of opium to be carried on their steamers or allow it to be mentioned in their trade reports. Was sharing in the opium traffic all that your nation has done to wrong China? Perhaps not, we leave that to our politicians and theologues, for here is a subject worthy of their attention."

What is true of China as an opium-cursed nation is in a measure true of most countries. The druggists of our land can give you an idea of the annually increasing sales of opium and its alkaloid derivatives. One druggist told me recently that the most cultured as well as the lowly, were daily customers; that it became necessary to purchase morphine in pound lots, instead of in drachm's as they used to do some years ago, and as I write these lines I desire to quote from the *American Druggist,* (Sept. 29, 1902,) an editorial concerning the sale of narcotic drugs.

"The pharmacist has a grave responsibility laid upon him in being entrusted with the sale of narcotic drugs. It is unfortunately true that there are those who look upon pharmacy merely as a means of livelihood and who consider that so long as their bank accounts indicate a favorable condition of affairs they have discharged their full duty; but these we believe do not represent the larger portion. The report of the committee on the Acquirement of the Drug Habit, which was presented at the semi-centennial meeting of the American Pharmaceutical Association, gives evidence that pharmacists in general desire to so conduct their calling as to protect the public from any mis-use of drugs. It is true that a few of those who replied to the queries of the committee showed an unseemly levity, and that one or two of the pharmacists questioned concerning the sale of narcotic drugs rather resented the efforts of the committee to ascertain the real facts concerning the subject. On the whole the number of the replies received was rather larger than might have been expected and the information given, as elaborated in the able report submitted by the chairman, was of great interest.

"There can be no question in the mind of any well informed man that there is a growing tendency to resort to the illegitimate use of narcotic drugs. As pointed out, misuse of drugs cannot be wholly avoided by the pharmacists. It is only through the drug trade, either wholesale or retail, that the victims of drug habits can secure their supplies. It is the worst kind of sophistry for the pharmacists to say that he might as well sell opium or cocaine to a habitual user of it, for if he does not do so some other pharmacist will. Such a course of reasoning, if followed out to its logical conclusion, would make thieves of all of us, and the pharmacist who deludes himself into believing that such sophistry will excuse him from the responsibility for the results following such sales is short sighted indeed.

"It is well, therefore, for the pharmacist to frankly recognize the moral obligations under which he rests and to decline to sell narcotics to persons whom he knows or has reason to believe are *habitues.*

"The retail druggist has discretionary control of the sale of these drugs and he cannot be compelled to sell them without a prescription. It, therefore, behooves him to recognize this responsibility frankly anr fully, and to do his utmost to mitigate this evil by refusing not only to sell such drugs direct, but to re-fill prescriptions without the authority of the physician, where such prescriptions contain drugs, the prolonged use of which is likely to establish a habit.

"In fact, we believe it is good business policy, as well as sound principle for the pharmacist to discourage the re-filling of prescriptions without authority in so far

as he is able to do so without giving offense to his patrons, for it is frequently through the unauthorized repetition of prescriptions that the drug habit becomes established."

This editorial is timely, dignified and really worthy for any druggist to heed and the medical profession should benefit by it as well. It is with very great pleasure to have noticed the same, and increases our respect for the art and science of pharmacy.

I desire here to mention the same druggist's observations on the negro in the South and in our cities, who is rapidly succumbing to the dreadful cocaine stimulation, one infinitely worse than opium.

Not only the negro, the white slave is also being destroyed by thousands. Is it not sad to see so many bright minds succumb to these dangerous narcotic drugs?

As I write these lines, the news comes from our new possessions namely, the Hawaiian Islands, where the restrictions on opium and its derivatives were removed, or rather stand now removed, which under previous governmental management were carefully guarded with prohibitive restrictions on their statute books. It appears now that every thing is wide open as regards opium. What a frightful condition confronts our progressive nation should this not be corrected. Modern therapy has done much in curing this class of cases which after all are readily amenable to successful and humane treatment; another hopeful sign of modern times, is, as mentioned already, that those who regard morphinism as a habit are rapidly becoming obsolete and it is now almost universally regarded as a disease; and still another fact, *i. e.*, that civilized nations enact prohibitive statutes regulating the sale and use of those dangerous drugs; that the medical profession regardless of schools, is daily becoming more cautious in the prescribing of the dangerous poisons, doctors fully realizing the danger likely to arise from its too frequent use. I will cite you a few cases from our practice, illustrating how these unfortunate habitues suffer and how we have learned to treat them successfully without suffering, under humane management. A full description is herewith found in the report of the following cases:

Case 1, Mrs. S. H. (Sept. 1900), age 38, of American parentage, no hereditary tendencies, nervous temperament, black hair, of excellent intelligence and education; present morphinism began six years ago, which she attributes to an attack of acute articular rheumatism, requiring morphine and chloroform for the severe pains, status praesens, skin dry, flabby, yellowish in color; neck, face and hands thin, emaciated, and the panniculus adiposus of entire body reduced to the minimum, entire muscular system relaxed and flabby, irides contracted and non-responsive, ocular conjunctiva yellowish; gums retracted and spongy, teeth loose, tongue irritable and red, complete anorexia, gastric irritability, nausea and vomiting frequent, all visceral organs disturbed, bowels constipated moving only on taking quantity of physic and salines, the nervous system reduced where it was impossible for her to contribute her mite to the dynamics of social or even spiritual life, either in productive energy or in advanced thought, vitality gone, no vigor worth mentioning, just ready to be confined to an insane asylum; a mother of three children, complete cessation of the regular menstrual function for the past five years, had undergone surgical operation for plastic work on vagina, also repair of perineum and cervix uteri; had been doped with narcotic drugs and surgically conditioned, only to sink deeper and deeper into the grasp of her master, Morphine; had been at several of the leading Homes and Eastern Sanatoriums where they make special claim of curing the narcotic habitues, but could not endure the inhuman torture of treatment, with no help in sight from the established Homes; she tried several Home Treatments with negative results, until she was referred to me for treatment. She was then using 60 grains morphine sub-cutaneously in 24 hours. In six weeks treatment, without the slightest discomfort, she was free from morphine and gaining hourly in physical and mental strength, with a high aim and determined will to remain free for the remainder of her natural life.

Under our mode of treatment this was a not altogether difficult one to treat successfully. The first thought in this case was to build up the general nervous system in advance of gradual removal of the morphine, meet the existing complications with Soma-Osmotine Baths, Vibro-Massage, Static Electricity and Manual Therapy as needed, (no internal or drug medication of any kind was resorted to); also pure nutritious food, interdicting coffee, tea, milk and all stimulant nitrogenous diet. As said before, such patients are, as a rule, difficult ones to treat, at times requiring many months careful management, yet we were able to meet the complications as above described, when several Sanitoriums where they attempted to practice a gradual reduction method combined by the usual midriatic medication was of no avail, yet these institutions made claim that the treatment was regarded one of never failing success and antidotal to morphine. Any treatment which does not take into consideration the pathological condition of the nervous system, nutrition in general and the mind, will necessarily fail in many cases and the rule with us is that any case we accept, we can treat successfully, not by an internal drugging system, but as indicated above, by the aid of systematic instruction in diet, how to live a clean mental and physical life, hydropathy, massage and static electricity, etc. This clinical report, though somewhat desultory, is of value in pointing out again, the importance of prescribing, by the profession, the dangerous narcotic drugs with more care.

Case II.-Dr. C. S., Pa. (Aug. 1900), U. S. Parentage, age 48—No hereditary predisposition, of excellent education, and previous to morphine disease had a splendid physical make up.

Ten years previous he began to stimulate when pressed hard in his professional work, when tired out and could go no longer, a small dose of morphine made a new man of him. Under its influence he could endure any hardship, and with it became vigorous and eloquent in a particularly fascinating manner, which the alcoholic stimulation would no longer produce. But in six months after, he noticed the blunted perception and sensory depression, requiring ever increasing doses, until, when he presented himself for treatment he took from 50 to 60 grains daily, sub-cutaneously, and with cocaine.

Status praesens, a tall, lean, high strung, morphinomaniac, weak, emaciated, bowed down in grief and misery, entire body needle punctured and with numerous abscesses, an object of pity, without mind or physique left worth mentioning. Again and again he determined to get away from morphine; for a month he battled to reduce the quantity to one grain, with the suffering of the damned, but could not get away. In his desperation he now added cocaine. His friends soon saw that something had to be done with such a shattered nervous system; he also had general visceral disturbance, palpitating heart and pulse rate from 90-100; at times intermittent, oxyhaemoglobin reduced 4.5 and blood coagulating as it emerged, with 45. c. m. albumin in urine and a confirmed delusion that he had diabetes. A year ago he was under treatment in a gradual reduction Home with negative results, and during his treatment there had to discontinue the same on account of the increasing frequency of attacks of lipothymia, nervous explosions and attacks of diarrhoea and exhaustion spells. With such a complication, no expert would be over desirous of undertaking the management, yet under our system of management the desire for the drug was easily reduced to 1-120 grains and in another month he was entirely free from morphine, cocaine and alcohol, a dangerous trinity at best.

Beginning to gain daily in weight and strength, the nervous system regaining its lost tonus rapidly, and as said before, this case came under our management, took the Soma-Osmatine Baths, Static, Electricity, Vibro-Massage and proper dietary, with no internal treatment whatever, yet made an uneventful recovery and was able to assume his professional work in less than six months, and at this writing has regained his former splendid physique, with a determination never to resort to morphine, cocaine and alcohol during his natural life.

These cases are instructive to any medical man and plainly show that the professional and commercial pursuit for existence, wealth, and ambition has keyed the nervous system to its utmost; daily aye; hourly, requiring an excessive expenditure of nervous force, when once any such temperament comes under the subtle, bracing and stimulating influence of the narcotic drug group, it is no wonder that thousands upon thousands fall slaves and lie prostrate before this hydra-headed monster, whose grasp no one eludes until skillful help comes to such, and this enslaving of untold thousands goes on, not only in China, but in every civilized country since the discovery of morphine in 1817, for before that date the opium habitue was less frequently found; but with the advent of the hypodermic syringe in the early period of 1850 an appalling increase is to be found among all peoples to drug stimulation. Another etiological factor is the overcrowding of our youth during school life, leading to numbers of neurasthenics, traceable to mental strain, thus making such, susceptible to drug and alcohol stimulation by scores. Most cases are probably directly traceable to acute and chronic rheumatism, neuralgia, pelvic diseases, etc.

The alcohol habitue frequently turns to morphine and allied narcotic drugs as a means of relief; this is a dangerous duality, and leads, very often, to cocaine intoxication and forms the deadly trinity of alcohol, morphine and cocaine. Physicians are, as a rule, more cautious of late in prescribing the dangerous alcoholic and narcotic drugs. If the practicians will now realize the fact that these cases are curable and that these addicts should not be discouraged in the attempt of being cured, but should be sent early to some reputable institution away from friends, where they can be placed under skillful treatment, for any attempt of self-treatment or home management will surely result in failure.

There are few problems of greater importance than the place that should be accorded narcotic drugs and alcohol, hence, would say: That the profession should realize the fact and emphasize it, to be more and more careful in the prescribing of the same, and never permit the patient to know, when such drugs are really necessary to be given.

To be constantly on our guard lest we are the means in causing a patient to become a drug or alcohol habitue.

To bear in mind that the drug and alcohol disease should be treated early when we are justly warranted to expect, a successful cure.

Also to remember that the quick cures and home treatments so extensively advertised are a delusion and never cure your patient and lastly do not have too much confidence in the midriatics, for they will as well disappoint you. That the Hyoscin hydrobromate is unfortunately not a successful specific for the cure of the drug and alcohol habitue and needs at best the exercise of much care when employed in the hypodermatic use.

Lastly there are no specifics and that the drug and alcohol habitues are the subject of a mental infirmity and should come under the same statutory control, which relate to the protection and treatment of the insane and that the great State of Ohio is in great need of an institution where these important habitues could be placed under a humane, but compulsory remedial treatment.

MINOR INJURIES OF THE EYE.

BY WILLIAM B. VAN NOTE, M. D., LIMA, O.

(Read before the Northwestern Ohio Medical Association at Findlay, Dec. 12, 1902.)

I was led to write on this subect, not that I expected to present anything new or original, but to bring the subject up for general discussion, during which, I hope to profit myself.

For convenience, injuries may be divided into three groups:

First. Injuries by contusion.

Second. Injuries by penetration.

Third. Injuries by light, heat, and chemical substances.

An example of the first group of injuries by contusion, is the common "Black Eye," result of a forcible argument or

an accidental blow of any kind, or severe coughing, whooping cough in particular, or it may follow in some hours fracture of the skull.

And right here, if any brother has a remedy for causing rapid absorption of the coagulum, I hope he will favor us with it.

But if seen immediately after the injury, it can be materially limited by application of cold. A blow directly over the globe, is more serious as it may cause mydriasis, or even paralysis of accomodation. If the eye does not recover of its own accord in a few days, good sized doses of strychnia hypodermically in temporal region, give best results.

Detachment of the iris from the ciliary body (iridodialysis) is another result of a blow on the globe. It does no harm, if of small extent, and so far as I can learn, there is no special treatment efficacious, beyond rest and iced compresses, to reduce tendency to renewed hemorrhages. Should iritis supervene, use atropine.

II. Injuries by penetration affect the lids, as incised, punctured or lacerated wounds of the skin in other regions. They should always have the edges carefully coapted and secure union by first intention, if possible, to prevent serious disfigurement and danger of ectropion, epiphora, etc. It is important to examine the globe carefully to be sure it has not been penetrated.

Wounds of the cornea vary greatly. Probably the most common and simplest one, is result of a cinder in the eye, which is easily removed with a wisp of cotton, wrapped on end of a tooth-pick. The eye should invariably be flushed out with a boracic solution, or other mild antiseptic (the conjunctiva does not stand strong antiseptics), as I have seen a severe purulent ulcerative keratitis follow such a trivial wound, when septic infection occurred from material already in the conjunctival folds.

Workmen in iron and steel factories are continually getting small scales of iron in their corneae. These are usually removed easily, after cocainizing with a two to four per cent. solution, using a clean, sharp-pointed instrument, or a spud. I emphasize *clean*, for I have seen ulcers follow removal of such scales by a brother workman's pen knife, or end of a file, sharpened for the purpose. After the scale of iron has been removed, there still remains a small ring of brown colored tissue, caused by the corneal tissue taking up the oxidized iron. It facilitates healing to gently curette the stained tissue.

Where a small foreign body has remained imbeded in the cornea several days, an inflammatory infiltration forms about it, in a grey ring, which breaks down and the foreign body will be expelled, but so much reaction is brought about you may have an iritis develop.

Therefore, after removing such a foreign body, it is well to instill a drop of atropine, one-half or one per cent. Be cautious with atropine in people past forty-five.

I believe grains of gun powder or of lime, are the only substances that can remain imbeded in a cornea that it will not throw off.

Sometimes we have a simple erosion of the cornea, caused by a finger nail, a leaf or a twig of a tree; they usually cause marked pain, photophobia, lachrymation, etc.

The injury, being transparent, is very difficult to see. It can usually be discovered by allowing the light to fall on the cornea at different angles, when you will notice there is no reflex from the line of injury.

Apply very hot applications, the small pad being changed frequently. I tell patients to use two pads of cotton, or cheese cloth, size of a dollar; keep one in the hot water, one on the eye; change every minute for half an hour; keep the water very hot.

I sometimes add, *"Use them just a little hotter than they can stand,"* to emphasize necessity of being very hot.

(I usually give some boracic acid to put in the water.) Then tie the eye up with a firm bandage, making enough pressure to keep the lid quiet. If there is much circumcorneal injection on second day, use atropine and hot applications three or four times daily. Nothing stimulates nutrition in the cornea like heat.

There is one particular abrasion of

the cornea that occurs about this time of year, or more properly, in October and November, during corn husking, to which I wish to call your attention.

Whenever a man comes in saying, "I was husking corn yesterday and a blade struck me in the eye," I look for trouble. It seems the dust on the corn blade contains some virulent germ that thrives well on corneal tissue. If neglected a few days, it forms an ulcer that spreads in all directions.

If seen early, I use bichloride of mercury flushing and hot applications every two hours during the day, then insert two per cent. yellow oxide of mercury ointment, and tie it up at night. In the severer cases, it is necessary to sear it all over with the electro cautery; they always leave a permanent opacity.

Injuries that penetrate the cornea require great care. If the iris does not prolapse, thorough cleansing of the conjunctiva, a bandage and absolute quiet in bed is usually sufficient. If the lens has been penetrated, a cataract usually develops. If the iris prolapse, it should be cut off close to the cornea, and atropine, one per cent., instilled, if the wound is near the center of the cornea; or eserine, one-fourth to one-half per cent., if near periphery.

A penetrating wound at the sclero-corneal junction is very serious, as it is often followed by sympathetic trouble, and loss of the other eye, so we will call it a major injury and not discuss it.

III. The injuries by heat, light and chemical substances are quite common. Burns of the lids are important because of the disfigurement they cause. They are mostly produced by small flaming objects, as the end of a cigar, sparks from fireworks, molten metal, etc.

In our town, the most common cause is pouring hot spelter on a cold surface, when a sort of explosion frequently follows, scattering the molten metal in the workmen's face and eyes. A moist dressing, consisting of cheese cloth, soaked in one or two per cent. carbolic solution, should be loosely applied after thorough cleansing; then cover dressing with a layer of rubber or silk protective tissue, to prevent evaporation.

Frequent change of dressing is necessary to keep them moist. Where the skin is destroyed and granulations form, they grow through the meshes of the gauze, and are injured at each removal of the dressing. A silk or rubber dressing cut in strips to allow secretions to escape, is best at this stage.

The condition of the conjunctiva should be carefully ascertained and watched. If it is destroyed on both lids and globe, or severely injured, it is almost sure to form adhesions. The lid should be raised from the globe several times daily and sweet oil instilled. If the cornea is involved, a solution of atropine, one-half per cent. and cocaine, two per cent., in castor oil, relieves pain and lessens danger of iritis. Frequently morphine internally will be required to ease the pain. Powder burns with retention of the grains of powder in the lid cause intense reaction.

After twentyfour to forty-eight hours the application of hydrogen dioxide will allow the grains to be removed easily.

Unslacked lime and mortar frequently gain access to the eye. As the lime slacks, from contact with the tears, it penetrates deeper and deeper; all particles must be removed by irrigating. A strong solution of sugar is good as it dissolves the lime. If the cornea is injured, it is pretty sure to leave a dense leucoma; if the conjunctiva, look out for symblepharon.

Exposure to intense light, like the sun or snow, sometimes causes acute conjunctivitis, which soon subsides under ordinary treatment, like cold compresses and boracic flushings.

THE

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A MONTHLY REVIEW OF MEDICINE AND SURGERY.

THE OFFICIAL ORGAN OF THE LUCAS COUNTY MEDICAL SOCIETY.

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EDITORIAL.

THE AMALGAMATION OF THE TOLEDO AND LUCAS COUNTY MEDICAL SOCIETIES.

Talk of the uniting of these two societies had occasionally been heard, for the past six months, but nothing tangible had taken place. Each disliked to surrender its identity. This was but natural. The Toledo Medical Society has had an honorable career for more than half a century. Some of its present members had held membership in the organization for nearly all of that time;—could almost be said it was a child of their creation. Valuable papers had been read at its meetings and much good work had been done. It was not at all surprising, then, that certain of its members were averse to any change by which the old society should go out of existence. Its age, however, was an element of weakness. Its members had lost their old time enthusiasm; they were indifferent to the preparation of papers and to the attendance of its meetings, the result being a very general falling off all around. On the other hand, the Lucas County Society was of recent organization (1890), composed of young, energetic, ambitious prictitioners, thoroughly versed in all the methods of modern medicine and surgery, capable of doing good, scientific work, and all working harmoniously for the success of the society. The meetings were well attended and papers of a high order of merit were presented, and consequently they were loath to lose their individuality. But the times were propitious for a change. It was believed that by an amalgamation a larger attendance would be secured, more papers would be presented, and a better and more congenial spirit prevail among the profession.

Some weeks ago, each society met at its accustomed time and place and voted

that the merger should take place, and Friday night, January 2nd, was the time set for the "marriage." The attendance was large, and the kindliest of feeling prevailed. A constitution and by-laws were adopted and the new society was named and will hereafter be known as "The Academy of Medicine of Toledo and Lucas County." The routine work completed, the election of officers was next in order and resulted as follows:

President—Dr. J. H. Jacobson.

Vice President—Dr. S. S. Thorn.

Secretary—Dr. H. S. Smead.

Treasurer—Dr. W. W. Grube.

These men need no introduction to the profession. They are among our foremost practitioners. Dr. Jacobson is a young man of pleasing personality and unusual brilliancy. His papers before medical societies and to the medical press are marked by careful preparation and much thought. As a surgeon he has an exceedingly bright future. Dr. Thorn has long been recognized as one of the leading physicians and surgeons of Northwestern Ohio, and has been honored by the different medical bodies of which he is a member. Dr. Smead is an exceptionally able young man, being at the head of the bacteriological department of the Toledo Medical College.

It will thus be seen that the society has been most fortunate in the selection of those who are to look after its welfare for the first year. After the election of officers the society adjourned to the St. Charles Hotel, where an excellent banquet was held, and where short speeches were made by Drs. Strausz, Haynes, North, Gillette, Wright, Fisher, Mr. Knabenshue, of the Blade, Dickey and Thorn, and the newly elected president acting as toast master. Each in turn spoke enthusiastically of the alliance and predicted increased good for the profession as its result.

SELECTIONS AND ABSTRACTS.

PERFORATION OF THE BOWEL IN TYPHOID FEVER.

The paper of G. E. Armstrong of Montreal is of interest especially from its statistics of operations done in the author's own city. In this series the operation was performed during the first twelve hours in ten cases, with four recoveries, or 40 per cent.; the second twelve hours in ten cases, with one recovery, or 10 per cent. Of the twenty cases operated upon during the first twenty-four hours, five recovered, or 25 per cent. Operation was done during the third twelve hours on three patients, and they all died; on one patient, forty-eight hours after perforation, another sixty-eight hours after perf oration, who also died; on one, seven days after perforation, who recovered; in seven cases, time after perforation uncertain. Of the six who recovered one was operated on two hours after the perforation, one thirteen hours after, one eight hours, one ten hours, one five hours, and one seven hours after. The operation in the last case was really nothing more than the opening of an intra-abdominal abscess. Four of the five cases were operated on during the first twelve hours.—Annals of Surgery.

PARADOXICAL PSEUDOHYPERTROPHY FOLLOWING INFANTILE CEREBRAL HEMIPLEGIA.

L. Pierce Clark says that the hypertrophy of paralyzed parts in infantile cerebral palsy is a rare condition, no cases illustrative of it having until now, been reported in America. In those reported in other countries the more important symptoms of the onset of cerebral palsy have usually been absent in the hypertrophic cases, but in those observed by the author there were more or less severe convulsions, vomiting, fever, and physical prostration. Athetosis may or may not occur.

The mental state of these patients, on the whole, is better than usually obtains in palsy cases. The length of time necessary to produce the hypertrophy is difficult to ascertain, but the time elapsing between the palsy lesion and the detection of the hypertrophy has varied from eight to twenty-nine years, the average being sixteen years. The hypertrophy may involve any and all parts that are paralyzed, even the breast and the testicles may enlarge. The muscles most frequently hypertrophied are found in the following order of sequence: biceps, deltoid and triceps. The parts not hypertrophic follow the general law for atrophies in ordinary cerebral palsy cases.—The Journal of Nervous and Mental Disease.

GIANTISM.

Henry Meige states that a comparative study of giantism shows that it is intimately related to acromegaly. There is an abnormal and excessive osteogenetic function which results in giantism so long as the bone is capable of increasing in length, and in acromegaly when ankylosis of the epiphyses interferes with the manifestation of the hypertrophy, except at the extremities of the bones. The cause of this perturbed function cannot as yet be definitely stated. But it is well to bear in mind the affinities existing between the bony development, the genital development and the condition of the vascular glands, the thyroid in particular. Both giantism and acromegaly are frequently accompanied by general phenomena, such as pain, circulatory troubles, urinary and sexual disturbances. Giants belong to two types—the infantile and the acromegalic, with intermediate types. Marriage should be discouraged in individuals of either type.—Archives Generales de Medecine.

A CASE OF TRYPANOSOMA IN A EUROPEAN.

The wife of a missionary in the upper Congo, where she had lived for about a year, was sent to Dr. Manson in London. She complained of persistent fever and impaired health, with no improvement from the taking of quinine and arsenic. The group of symptoms found consisted of fever, enlargement of the spleen, not very marked, but distinct oedema of the face, and a multiform erythema. Examinations of the blood were made regularly for a fortnight, without result, but later, while the leucocytes were being counted, an unquestionable trypanosoma was found. On the examination being repeated, other specimens of the parasite were readily discovered. For some unknown reason the parasites must have been latent during the first part of the patient's residence in the hospital, or so very scanty in the peripheral circulation that they were overlooked. Possibly in the presence of this parasite we have an explanation of some of the anomalous chronic fevers, such as kala-azar, which has hitherto defied investigation in tropical countries.—The Journal of Tropical Medicine.

FOOT-AND-MOUTH DISEASE IN NEW ENGLAND.

Secretary of Agriculture Wilson has notified the managers of railroad and transportation companies of the United States, stockmen, and others, of the establishment of a quarantine on cattle, sheep and swine in the New England States, and has forbidden the exportation of such animals from the port of Boston until further orders. Recent investigations by the Department of Agriculture have shown foot-and mouth disease prevaile extensively in Connecticut, Rhode Island, Massachusetts and Vermont. Dr. Mohler of the department, Dr. Leonard Pearson of the University of Pennsylvania, and Dr. James Law of Cornell recently visited the infected districts and united in a recommendation that in order to prevent the further spread of the disease a quarantine should be established immediately. An order quarantining the Brighton Stock Yards, which is the clearing-house for cows

for the Boston milk district, and to which the foot-and-mouth disease has been traced, was issued last week by the Massachusetts Commissioners. It is believed, however, that the epidemic originated in Rhode Island. The Connecticut authorities deny that the disease exists among cattle in that State. The last previous epidemic in New England, which occurred about thirty years ago, was traced to some cows brought from Canada.—Med. Record.

RHEUMATISM.

A. M. CARPPENTER, M. D.

Vice-President and Professor General Medicine, Barnes Medical College, St. Louis, Mo.

Rheumatism is not merely a localized disease characterized by red, swollen and painful joints, which are an agony to the sufferer, but it is a general condition of the system of so marked a character as to be denominated by pathologists a true diathesis.

The tendency of rheumatism to leave suddenly one articulation and to attack another, renders it a constant source of dread, while its liability to attack the valves of the heart and terminate in an incurable organic heart lesion, emphasizes the importance of correcting the condition as early as possible.

While various methods of treatment are advocated, the opinion of Dr. W. Ewart, of London, is that most generally accepted and followed.

Dr. Ewart states that since rheumatism is invariably accompanied by the loss of appetite and embarrassed metabolism, it is naturally the result of accumulated secretions and imperfect excretion, hence it is best treated by freeing the bodily outlets and carefully measuring the supplies.

He questions whether acute rheumatism could long exist with diarrhoea, and while recognizing the necessity of the salicylate treatment, he advises that such be combined with mild cholagogues, diaphoretics and diuretics.

Furthermore there are very many and grave drawbacks to the use of either salicylic acid or any of its salts alone in a treatment which may last, as in rheumatism, gout and neuralgia, for a long period of time.

Being a powerful antiferment, salicylic acid may impair digestion and develop a dyspeptic condition. Its after-taste can be covered and concealed in no manner yet discovered, so that it is apt to become repulsive to the patient.

Tongaline is constructed exactly in accordance with Dr. Ewart's suggestions, since in addition to the salicylates it contains the cathartic and diuretic action of colchicin, the diaphoretic action of pilocarpin, besides the anodyne and sedative actions of the tonga and cimicifuga.

Furthermore, all the salicylic acid used in Tongaline is made from the purest natural oil of wintergreen. This salicylic acid is the only kind which should ever be administered internally, since that made from coal-tar has been pronounced unfit for medical purposes by the most eminent physicians and therapeutists.

Tongaline on account of its composition, exerts a general action on all the excretions in the exact proportion in which such is needed. If any one organ requires but little correction, it receives no more, and on that account sufficient force is retained to exercise itself where it is more in demand. As a result, the beneficial effects of Tongaline are utilized to their fullest extent without being followd by bad reactionary conditions.

Extract from "*Treatment of Diphtheria,*" by Dr. J. W. Pearce, in *American Practitioner and News,* July 15th, 1902:

"To briefly relate, this is the way I treat diphtheria, and I have never lost a case. If I can get perfectly fresh antitoxine I give it, but if it can not be had perfectly fresh I do not. Whether antitoxine is given or not, I give ecthol in full doses appropriate for the age of the patient, every three hours, administered by the mouth. The entire fauces, larnyx and pharynx are sprayed with a mixture of ecthol and peroxide of hydrogen, three parts of the former to one of the latter, every fifteen to thirty minutes. Calomel

in small doses is administered every hour until the bowels are thoroughly moved. Nourishing and supportive diet is given at short, regular intervals, and everything done to make the patient comfortable in the way of supplying fresh air, etc. I have been using this plan, modifying it to suit the needs of each individual case, for several years, and cannot recommend it in too glowing terms to my fellow practitioners, knowing that it will give good results and entire satisfaction if it is carefully and effectively administered and carried out. Nothing can save a patient in *articulo mortis*, and it is needless to try this in such cases, hoping to do something."

NORTHERN TRI-STATE MEDICAL ASSOCIATION.

AT BUTLER, IND., JAN. 20, 1903.

PROGRAM.

1. "Inhalers and Their Use in Medicine," Dr. Spohn, Elkhart, Ind. Discussion led by A. E. Bulson, Jr. Ft. Wayne, Ind. Discussion by Dr. De Vilbiss, Toledo, Ohio.

2. Paper, Dr. W. W. Bowker, La-Otto, Ind. Discussion by J. A. Weitz, Montpelier, Ohio. Discussion by T. F. Wood, Angola, Ind.

3. "Retro-deviation of the Uterus." H. D. Wood, Angola, Ind. Discussion by W. J. Gillette, Toledo, Ohio. Discussion by Dr. John Long, Bryan, Ohio.

4. "Two Cases of Obstruction of the Bowels Due to Meckles Diverticulum." Dr. Hal. C. Wyman, Detroit, Mich. Discussion by W. W. Barnett, Ft. Wayne, Ind. Discussion C. B. Steman, Ft. Wayne, Ind.

5. Paper. Dr. Daniel LaFarte, Detroit, Mich. Discussion by Dr. J. B. Casebeer, Auburn, Ind. Discussion by Dr. C. Kirkpatrick, Adrian, Mich.

6. "Treatment of Tuberculosis." Dr. M. M. Alwood, Montpelier, Ohio. Discussion by Dr. D. H. Wood, Coldwater, Mich. Discussion by T. B. Williams, Angola, Ind.

7. (a) "Report of a Case of Brain Abscess, with Operation—Death from Cardiac Complications." (b) "Some new points in diagnosis of cardio-œsophageal Cancer, with Report of Four Cases." G. W. McCaskey and Miles F. Porter, Ft. Wayne, Ind. Discussion by Dr. Theo A. McGraw, Detroit, Mich. Discussion by Dr. Bayard Holmes, Chicago, Ill.

8. "Appendicitis." Dr. J. L. Gilbert, Kendallville, Ind. Discussion by Dr. C. A. Dougherty, South Bend, Ind. Discussion by Dr. Budd VanSweringen, Ft. Wayne, Ind.

9. "Cases in Practice." Dr. C. A. Dougherty, South Bend, Ind. Discussion by Vesta M. Swartz, Auburn, Ind. Discussion by Dr. David Mortland, Edgerton, Ohio.

10. "Neurasthenia." Dr. Albert J. Maris, Waterloo, Ind. Discussion by W. H. Baldwin, Quincy, Mich. Discussion by Albert Hathaway, Edon, Ohio.

CREOSOTAL IN CROUP.

BY DR. LUDWIG LAZANSKY,

Municipal Physician and Railroad Surgeon, Neu-Strakonitz, Austria.

The excellent results obtained from Creosotal in the treatment of acute and chronic diseases of the respiratory organs incited the author to test the remedy in croup. The difficulties, such as late calls, the absence of proper nursing, the impossibility to operate on account of lack of assistance, the frequent unwillingness to permit the transportation of the patient to a hospital, etc., which the physician—especially in country towns—encounters in the treatment of croup, make a simple remedy devoutly wished for; and the author therefore advises every colleague to test the efficiency of Creosotal.

Dr. Lazansky reports a case of croup which for two days had been treated with all usual remedies, such as emetics, expectorants, inhalations, inunctions with grey ointment, compresses, etc., without avail; it remained hoarse, short-breathing and, on the third day in the afternoon became feverish to 102.2 F. Rales in the lungs were noticeable. The parents began to fear that the disease would carry off their second child, as it had their first.

Based on his experience with Creosotal

in pneumonia, and in view of the status of the lungs, he decided to try Creosotal immediately—even before operative procedure. Creosotal was therefore administered as per recipe below. The next morning the child was entirely antifebrile, breathing was regular, the voice only slightly husky, the lungs clear, and vomiting had not occurred. Two days later the boy was pronounced cured.

In this case Creosotal not only prevented a case of complicated pneumonia, but has also cured the croup, so to speak, overnight, and made operative procedure needless.

Dr. Lazansky had two other cases of croup, accompanied by fever, in the same month; Creosotal was given immediately, and with equally favorable results.

The author's observations were limited to these three cases, croup being a rare malady in this section; but since three patients treated with Creosotal made a rapid recovery, while three others resulted fatally under serum therapy, this report should be interesting in medical circles.

Dr. Lazansky now also prescribes Creosotal in false croup, measles and whooping cough, and is very well satisfied with the results. He generally begins as early as possible with the highest doses, which produces the characteristic Creosotal odor in the breath and the perspiration. Creosotal is continued in reduced doses after apyrexia, to prevent relapse.

The writer prescribes for children from 5 to 10 years:

R Infusi rad. Ipecacuanhae, 1⅓ to 3⅓ ounces.
Liquor ammon. anis, 15 to 22½ grains
Creosotal, 45 to 67½ grains.
Syrup. Senegae, ½ ounce.
MDS. According to directions. Shake. (4 times half-hourly, 4 times hourly, till fever diminishes; then every two hours a teaspoonful; then every three or four hours. If there is no cessation of the fever, bottle is to be used up in 24 hours.)

2. When high fever is present:

R Natrii salicyl., 15 to 30 grains.
Creosotali, 45 to 67½ grains.
Emuls. amygd. dulc., 3⅓ ounces.
Syrup. Ipecacuanhae, ½ ounce.
MDS. Idem.

3. For indigent people:

R Creosotali pur., ½ to ⅔ ounces.
S. Drops.
(One-fourth in ¼-pint boiled, sweetened milk; otherwise idem.)

The remark, "if no diminishment of fever, the prescribed quantity to be used up in 24 hours" should be impressed upon the mothers, since some may economize with the daily dose to make it last about three days. Dr. Lazansky therefore selects the spoon to be used himself.

Summarizing the experiences communicatd above, Creosotal seems to favorably influence not only diseases of the lungs of every kind, but also croup and all other infections of the respiratory organs.

Abstracted from the Deutsche Medicina Zeitung, Nov. 13, 1902.

ULCERS.

The local treatment of leg ulcers is of the utmost importance; unless this is given correct attention, we shall fail of results, even though our internal medication may be entirely correct. Carefully cleanse each ulcer. Be careful about using an anti-septic like corrosive sublimate, as this coagulates the albumen over the ulcer and thus forms a fertile field for the growth of bacteria. Stimulate granulations by applying the Protonuclein Special Powder. Combat constitutional disorders and see that the vitality of the patient is kept up by giving Protonuclein internally.—*C. W. McIntire, M. D., Lecturer on State Medicine, Kentucky School of Medicine, New Albany, Ind.*

SANMETTO IN CYSTITIS, URETHRITIS AND GENERAL INFLAMMATION OF THE GENITO-URINARY TRACT.

I am an earnest friend of Sanmetto. It is a valuable and ethical preparation. From years of experience in its use I have learned to rely upon it in cases of cystitis, urethritis, prostatitis, and general inflammation of the genito-urinary tract. In cases where its use is indicated its curative properties are most remarka-

ble. I am satisfied if the profession will carefully discriminate in their cases they will always be well pleased with the results obtained from the exhibition of Sanmetto. I shall continue its use where indicate.—*W. E. J. Michelet, M. D., Chicago, Ills.*

ALETRIS CORDIAL is an emmenagogue, not abortifacient. It cures congestion of the uterus and ovaries, and favours the occurrence of the menstrual discharge. It is also especially appropriate when the amenorrhea depends upon anæmia. It regulates menstruation, and is useful in all the derangements of menstruation, namely, amenorrhea, dysmenorrhea, and metrorrhagia, provided these disturbances be idiopathic. By curing menstrual disease, a common cause of sterility, it will also cure the sterility. It is also recommended in erosions of the cervix and vulvar eczema.

DEFECTIVE ASSIMILATION IN CHILDREN.

I have prescribed Seng in cases of poor digestion and defective assimilation in children, with very good results. I consider it a valuable general stomachic and digestant, and of especial service where the pepsin preparations are not so well adapted.—*A. H. Noon, M. D., Nogales, Ariz.*

HEART DERANGEMENT.

In several cases of heart derangement in which I have prescribed Cactina Pillets it has given almost magical results. I consider the remedy par excellence in all cardiac lesions, and will certainly use it in all indicated cases as long as I practice medicine.—*I. E. McGehee, M. D., Zieglerville, Miss.*

"STAND BY."

I have quite a satisfactory experience with Chionia. It is a "stand by" with me in all cases of hepatic torpor and acute indigestion. My druggist makes for me a preparation of phosphate of soda which I very frequently combine with Chionia, with most marvelous results.—*G. R. Johnson, M. D., Marion, Ala.*

SUPERIOR TO COMMERCIAL BROMIDE MIXTURES.

I have used Peacock's Bromides with the very best success, and prescribe it very frequently. It is in every respect superior to commercial bromide mixtures.—*Leo. E. Knoff, M. D., Beaumont, Tex.*

A MOST SEASONABLE SUGGESTION.

As the time is fast approaching when there is a demand for cough remedies, it will not be amiss to present a suggestion and a good remedy. In place of opiates, which always dry up expectoration, disturb digestion, cause constipation, and render the patient uncomfortable and drowsy, it is desirable to employ the most efficient and popular cough sedative of the present day, namely: Antikamnia & Heroin Tablets. This remedy relieves cough by its soothing effect upon the air-passages, but does not interfere with expectoration, and, in fact, renders it easier by stimulating the respiratory muscles. Only a very small dose, one tablet, every one, two or three hours, for adults, is required to produce a satisfactory result.—*Notes of New Pharm. Products.*

Dr. H. R. L. Worrall writes: "I think it may be of interest to know that some of the native surgeons here in Arabia treat inguinal hernia by reducing the hernia, then picking up the skin over the external opening, pass a needle through, including, if possible, the edges of the external opening in the muscular wall (on the opposite sides of the opening), and thus trying to make a closed way. One such case came to me to be treated for a return of the hernia. The cure lasted, he claimed, about two years and a half, the suppuration apparently helping the operation. The severe work which the patient had to do would cause a return of the trouble in almost any case. The work, although not the same, would correspond to longshoreman's work in America. As aseptic methods are absolutely unknown here, the remark that the suppuration apparently helped the operation is sufficiently explained."—**Med. Record.**

32d Annual Announcement of the

TOLEDO MEDICAL COLLEGE,

Session of 1902-1903.

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The Fall opening occurs Sept. 25th, 1902, in the new building at the corner of Cherry and Page Streets. Four courses, of at least seven months each, are required before graduation. As this is the only Medical College in Toledo, and has the active support of the profession of this City and the physicians of Northwestern Ohio, the College is able to give its students most excellent clinical advantages. Clinics are held daily at College building, while hospital work in general is done at Toledo and St. Vincent Hospitals.

FEES

Matriculation (payable but once)..... $ 5 00
General Lecture Fee, including Practical Laboratory, Dissecting and Hospital Tickets, each year..... 75 00

This fee, as fixed, pays for everything required in the respective years.
Students desiring to take any special course can do so by paying a fee of ten dollars.
Fees must be paid in advance, and promissory notes cannot be accepted.
No ticket or other certificate of attendance upon the college exercises will be issued to any student until the end of the term, and until all fees have been paid.
All students who have attended one or more courses at this college will be charged the fee in force at the time of matriculating.

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